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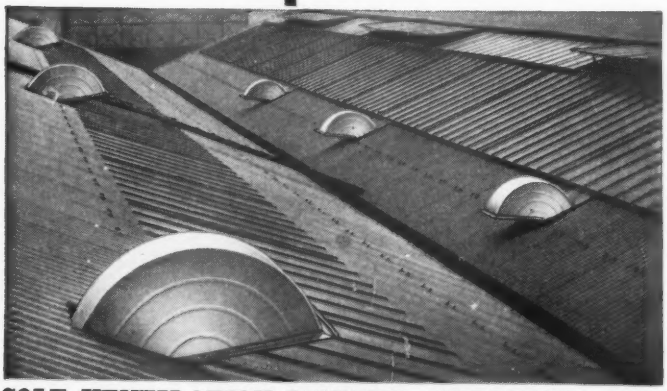
Problem: CONDENSATION

Solution: COLT Ventilation

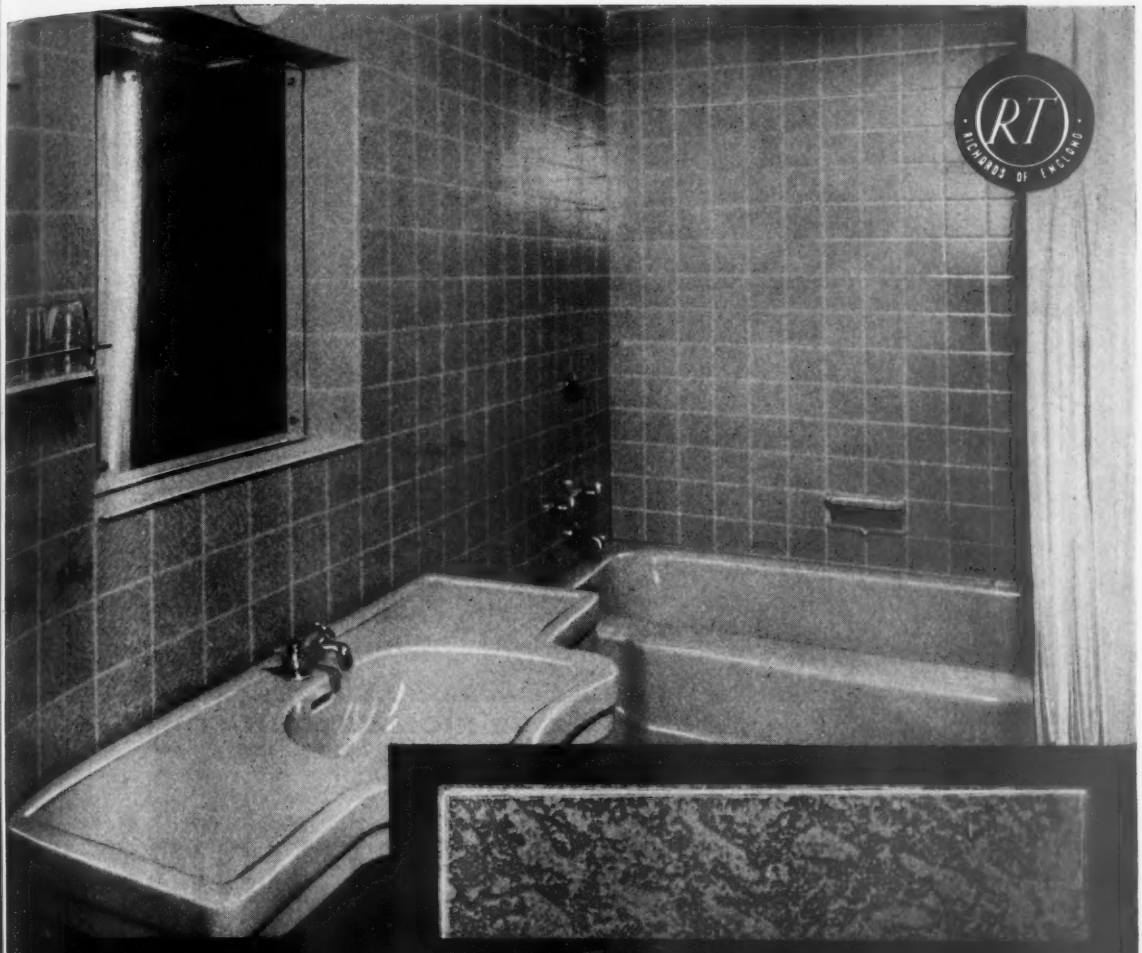
Place: JOHN BULL RUBBER CO LTD
GRIMSBY



The pressing of rubber mouldings at the large factory of the John Bull Rubber Co. Ltd. was raising humidity and causing condensation under certain climatic conditions. At these times sections of the structure and floor were covered with moisture and the working conditions were unpleasant.

Colt were called in and after a survey recommended the installation of Inflow Units and SRC 2046 ventilators. There is no condensation problem now at the factory, and Colt have added another success to a fine record. It is a record which has brought repeat orders from many world-famous concerns. Ask your Secretary to send for a free Manual to Dept. 39.

COLT VENTILATION LIMITED SURBITON SURREY Telephone: Elmbridge 0161



RICHARDS "DUROTEX" CERAMIC TILES

were used in all the new bathrooms in

The Bristol Hotel

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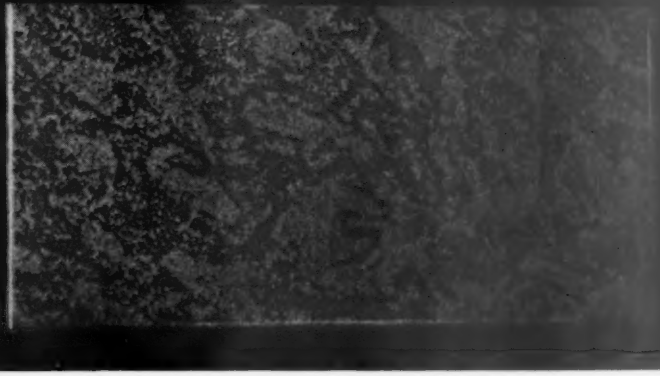


ASK FOR COLOUR CHART

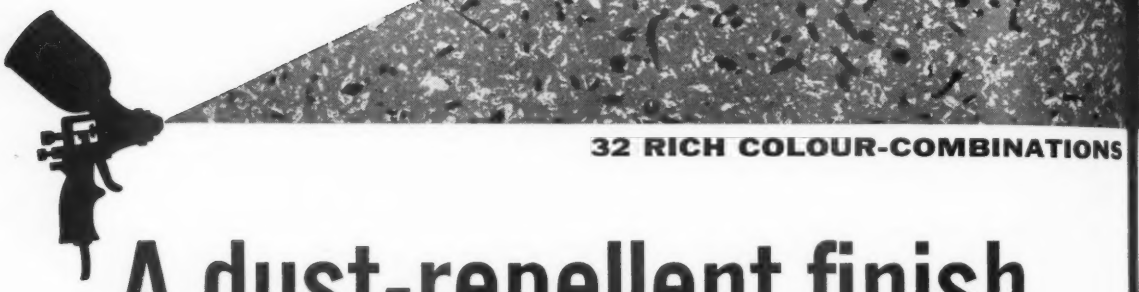
Consult our Technical Advisory Division on your tile fixing problems (Booklet T.A.D.2)

RICHARDS TILES LTD. *TUNSTALL, STOKE-ON-TRENT (Stoke-on-Trent 87215)*

London Office & Showrooms: Grand Buildings, Trafalgar Square, W.C.2. (Whitehall 2488 and 8063)

PORTERFLECK

ONE-SPRAY MULTICOLOUR PAINT



32 RICH COLOUR-COMBINATIONS

A dust-repellent finish for schools, hospitals and other public buildings

Porterfleck is a fascinating new multicolour paint with startling physical characteristics. First, and most important for public buildings of many kinds, it is "anti-static"—its molecular composition stops dirt from settling and keeps the surface clean indefinitely.

Secondly, it keeps its colour "flecks" suspended in the basic colour so that they don't mix even when applied. The flecks are of sufficient size to give a strong visual texture. The result is a rich, decorative surface that looks like expensive plastic sheeting—yet it's done in one quick spray operation.

PORTERFLECK SAVES MAINTENANCE

Besides its revolutionary dirt-repellent property, proof against normal accretion of dust and grime, Porterfleck has a very hard surface which is washable, unaffected by condensation, and highly resistant to scratching and chipping. It has an unusually long life, and maintenance costs are cut almost to zero.

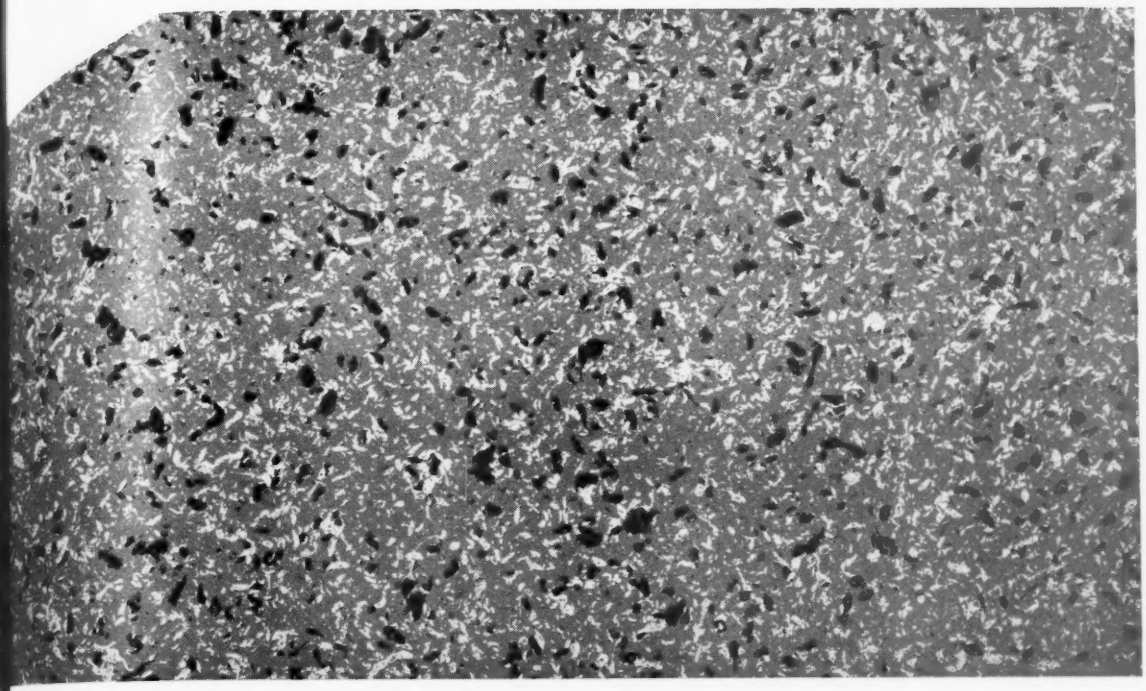
PORTERFLECK SAVES LABOUR

The film produced by one coat of Porterfleck is 4-5 times as thick as a normal paint film, so it camouflages irregularities in plaster, joins in boards and other surface defects. Always applied with a spray, Porterfleck is touch-dry in 2 hours, hard overnight.

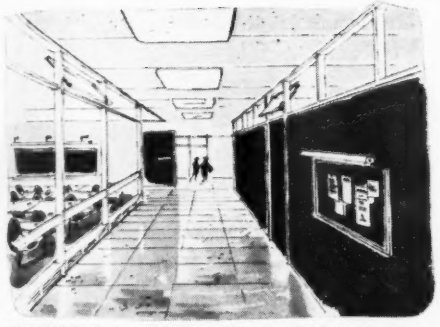
Porterfleck costs no more than a traditional one-colour finish—even allowing for an undercoat, which is not always needed because of the thickness of the Porterfleck film.

Full details and shade card (32 shades) available on request from:

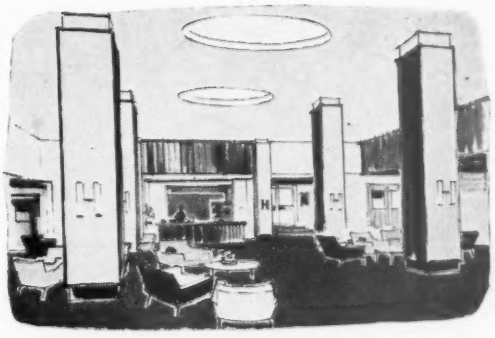
SISSONS BROTHERS & COMPANY LIMITED, BANKSIDE, HULL



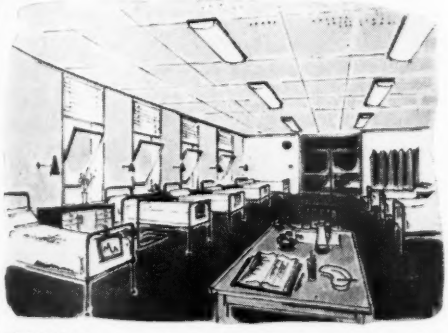
PORTERFLECK IS BEING USED...



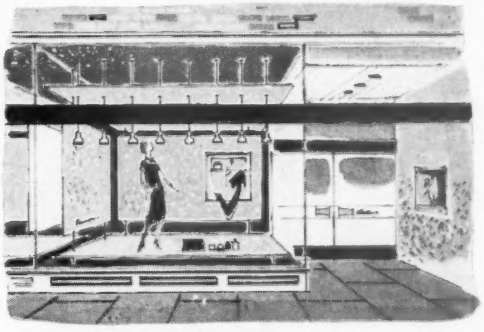
IN SCHOOLS *for its durability (including St. Blaise Secondary Modern School, Bierley, Bradford).*



IN HOTELS AND OFFICES *for its decorative texture (including the offices of Hay's Wharf Ltd., London)*



IN HOSPITALS *for its dust-repellent properties (including Lancaster Moor Hospital, Lancaster)*



IN SHOPS AND EXHIBITIONS *for its speedy application (including the Kitchensense Exhibition, London)*

PORTERFLECK

It pays you and your clients to put in *solid fuel* central heating

Lowest running costs. The big news in central heating these days is the amazing cheapness of the solid fuel systems. For example, the average weekly running cost for a two- or three-radiator system can be as little as 11/1d! Just compare that with oil, gas and electricity —see chart on right.

Lower installation costs. Compared with oil, solid fuel systems are much cheaper to buy and install. The new solid fuel boilers are really streamlined and require very little attention. They are thermostatically controlled and finished in gleaming vitreous enamel in a range of modern colours.

N.C.B. Housewarming Plan—offers a personal loan to cover the cost of a central heating installation. Low interest—five years to pay—tax relief.

Lowest maintenance costs. Solid fuel systems cost practically nothing to maintain. But with other fuels, skilled maintenance is necessary and this can cost from £5 to £15 per year—another 2/- to 6/- a week on the running cost.

Compare the costs. These are typical weekly costs, averaged over the year, for centrally heating a three-bedroomed house or bungalow—and hot water summer and winter. Look how much cheaper solid fuel is.

		6 or 7 radiators and hot water ▼	2 or 3 radiators and hot water ▼
COKE In independent boiler	**10/- per cwt**	**11/1d**	**16/8d**
SMALL ANTHRACITE In gravity feed boiler	**12/6d per cwt**	**—**	**14/8d**
GAS	**1/4d therm** plus, say, 2/8d a week standing charge	**16/1d**	**23/6d**
ELECTRICITY	**1d unit** (No standing charge included)	**18/2d**	**29/10d**
OIL	**1/5½d gallon**	***13/-**	***23/-**

** plus 2/- to 6/- a week maintenance cost.*

Write for FREE booklet on Central Heating and list of other technical publications to the Coal Utilisation Council, 3 Upper Belgrave Street, London, SW1. Also available 'Central Heating for Houses', a complete 120-page illustrated survey of all the various systems available, from the open-fire-and-back-boiler to the small pipe system. Copies 2/6d each.

The cheapest central heating there is – SOLID FUEL

ISSUED BY THE COAL UTILISATION COUNCIL

on the right lines...

BRITISH RAILWAYS CHOOSE ANDERSON STEEL "D" DECKING

Roofing at the Longsight Electrification Depot, completed recently for British Railways as part of their modernisation scheme, was Anderson Steel "D" Decking – a strong galvanised steel deck insulated and covered with a durable weatherproofing.

Contractors: Charles R. Price
Laminated timber: Kingston (Architectural Craftsmen) Limited

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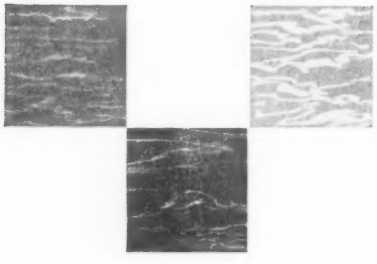

This is only one of the wide range of Semtex flooring materials, giving unlimited scope for any application.

- ✳ Excellent choice of decorative colours.
- ✳ Backed by the vast research facilities of the Semtex Organisation. Expert assistance on pre-treatment and other flooring problems.
- ✳ Skilled laying service through Semtex branches or approved contractors throughout the U.K.
- ✳ Contracting facilities also available throughout the world.
- ✳ Design consultancy service.

For further details please contact Semtex today.

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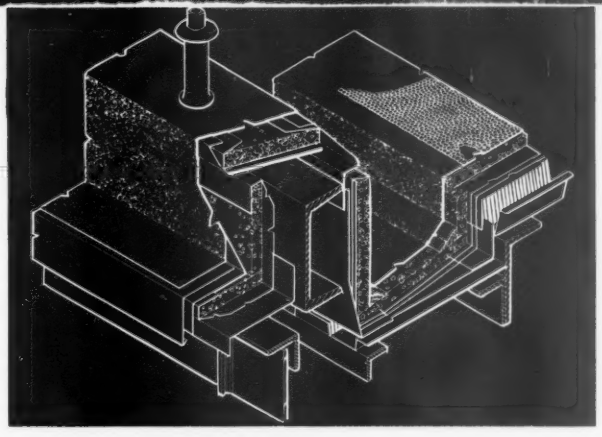
a problem in roofing

The "Bitumetal" roof in this case was constructed to give a specific 'U' value to meet the designed internal temperature and relative humidity of the building. The vapour barrier was necessary under these conditions to prevent interstitial condensation in the thickness of the roof insulation.

At the eaves, Briggs were faced with the problem of carrying the roof specification from the sole of the gutter, up and over the projecting R.S.C. and to the outside of the vertical cladding, so as to provide continuous insulation and vapour barrier protection over the complete roof.

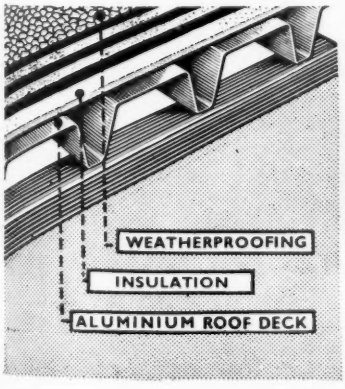
The Bowater Paper Corporation, Kemsley Mill, Sittingbourne, Kent — *Architects:* Farmer & Dark, London

solved* by *BRIGGS* design service



* Special aluminium sections were designed and provided to enable a practical detail to be carried out affording a sealing surface for the vapour barrier and full support for the insulation.

The resources, technical knowledge and experience of the Briggs Organisation are at the disposal of every Architect and Engineer. Consult our nearest area office for further details of Briggs Technical Design Service.



BRIGGS *the people to see about roofing*

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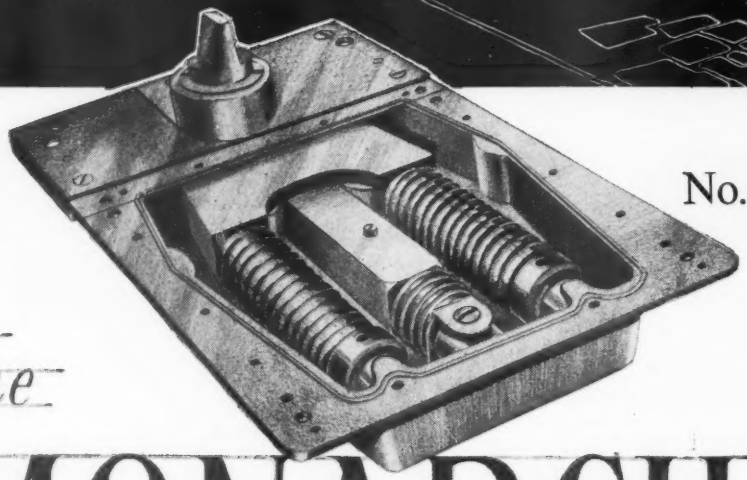

No. 400

The

MONARCH

Floor Spring

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All details can be found in the Barbour Index, File No. 53

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HIGHEST AWARD

Awarded the Gran Primio Con Menzione Speciale, this Primary School, Britain's Exhibit at the XII Milan Triennale, incorporates the special system of prefabricated steel construction designed and developed by Brockhouse Steel Structures Ltd., in collaboration with the Nottinghamshire Education Authorities. This system forms the basic element of the Consórtium of Local Authorities Special Programme of school building in this country.

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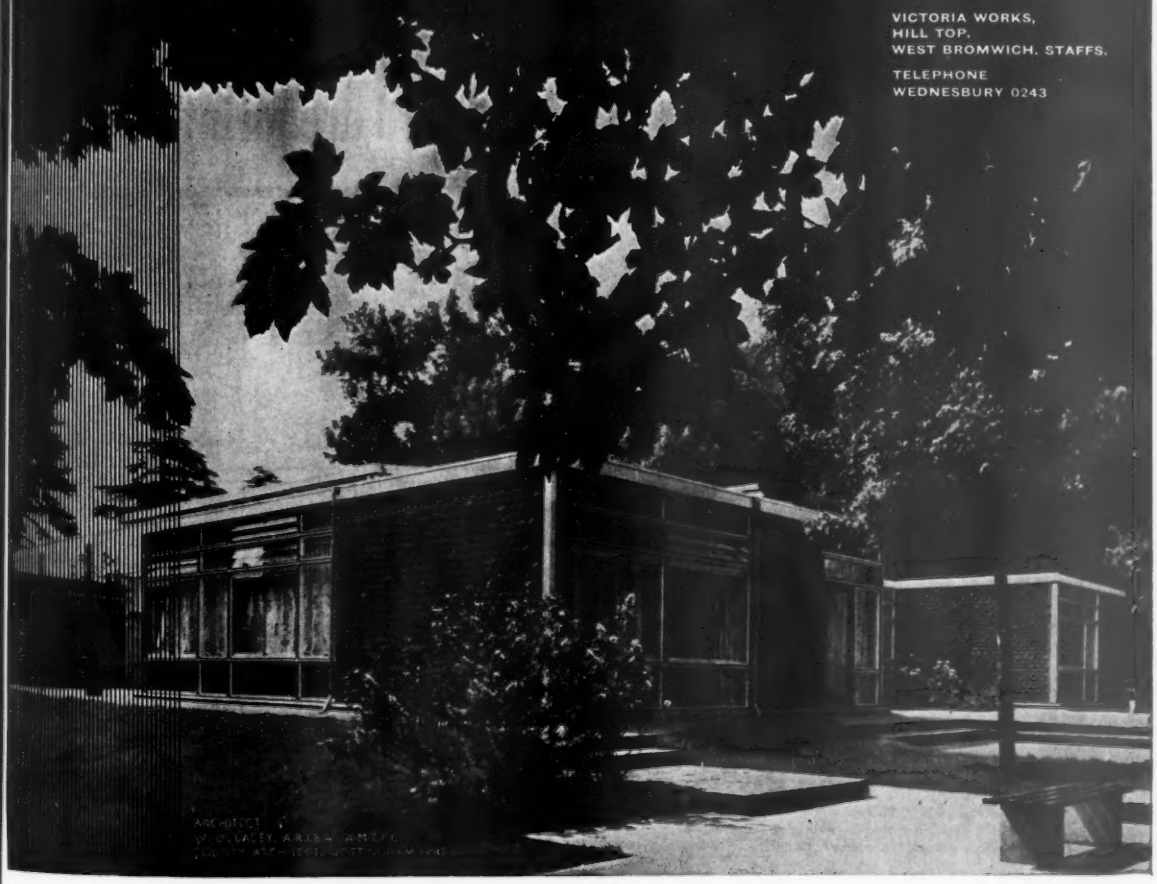
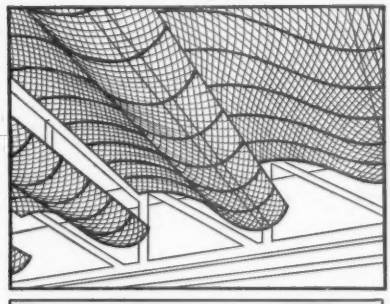


An Expanded Metal background was chosen for the intricate curves of London's Grosvenor Court Hotel restaurant ceiling.
Chartered Surveyors: Lane & Bridge.

and see how Expanded Metal translates the most complex suspended ceiling from drawing board dream into reality



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Flat, domed, arched, vaulted . . . whatever the form of the suspended ceiling you plan, Expanded Metal will match it . . . easily, accurately, beautifully and economically.

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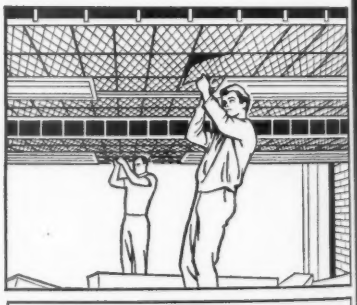

Expanded Metal is a major economy
Expanded Metal keys are permanent quality keys. With suitable plaster mixes a very high fire rating can be achieved and an exceptional degree of acoustic control attained. These benefits are additional to low initial cost.

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The first British White Portland Cement on the market.

Complies in every respect with the current B.S.12. Quality Control ensures a white cement which is ideal for use in structural concrete, pre-cast cladding slabs, reconstructed stone units, decorative floor toppings, kerbs, sighting lines, pointing of brickwork and masonry, rendering mixes, etc.

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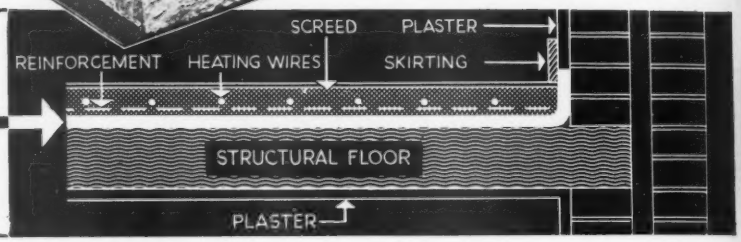
STILPHON 20 FLOOR INSULATION

STILPHON 20

Mineral wool mat of 7 lbs. cu. ft. density as a Thermal/ Acoustic leaf in concrete screed Floating Floor with underfloor heating



For the full details of these recommendations see "Notes on the Construction and Finish of Floors that are Electrically Warmed," produced by the Electrical Development Association, from which the following is an extract:—

"Suitable materials for use as perimeter and oversite insulation are:

Dense mineral wool mats or boards.
Resin-bonded fibre glass, weighing not less than 6 lbs. per cu. ft.
Cork slabs.
Expanded rubber.
Expanded polystyrene."

The Electrical Development Association's latest recommendations for underfloor heating construction define the qualities required by insulating materials for this class of work. Stilphon 20 complies with their requirements in high degree, it has exceptional resilience and has been specially designed to maintain an effective thickness under the loading of a concrete screed. So used it can therefore function efficiently both as a thermal *and* sound insulant. May we send you full details?

STILLITE
REGD. MARK

To STILLITE PRODUCTS LTD., 15 Whitehall, London, S.W.1.
Please send details of Stilphon 20.

NAME.....

ADDRESS .....

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Just attach to letterhead

R.I.B.A.

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Here's a Knight on the way to the top. Part of his success is due to attention to his surroundings. He knows that tired office furniture can mean tired thinking – and there's no time for that. Hence the new desk, a real beauty. Do what he did – come to Perrings.

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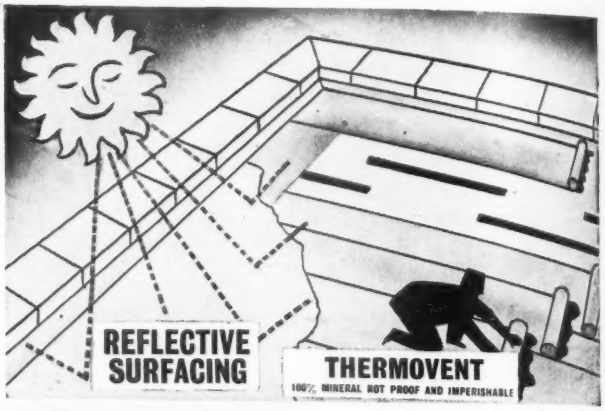
The THERMOVENT system of roof ventilation . . .

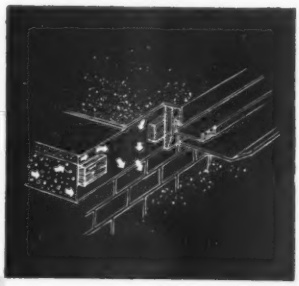
. . . a technique designed to protect the weather-proofing of flat roof structures against influences arising from:-

* **Moisture and air in insulation** * **Heat build-up on insulation**
* **Water in lightweight concrete** * **Roof movement**

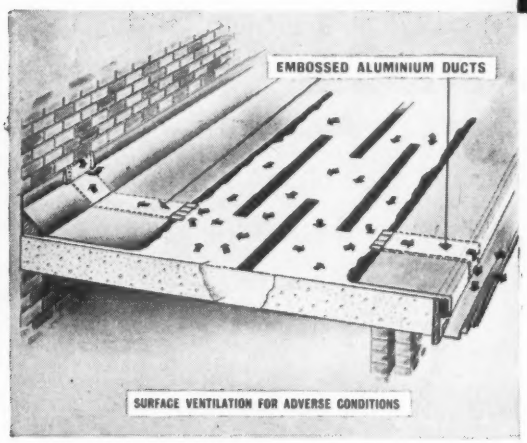
Thermovent is laid by the isolated system combining frame bonding and anchor strips to permit free vapour dispersal. The waterproofing is finished with a heavy stone surfacing to secure maximum reflectivity.



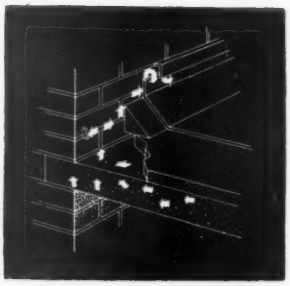
Where conditions are adverse surface ventilation is provided and metal ducts are fixed to relieve pressure to the outside air.



Drying in depth for extreme conditions is arranged at planning stage.



Typical detail is shown but others are available to suit design and advice will be given on request.



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WHICH WAY WOULD YOU TAKE THE TOWERS?

Down in the valley, the town needs more power. The time's come to bring in a power line from the Grid. That means towers, right across these fields, and on down into the valley.

There are perhaps a hundred paths the towers could follow. *One* must be chosen. Not plotted arbitrarily across a map, but thoughtfully, carefully sited, so that towers and cable strike the best possible balance with the landscape.

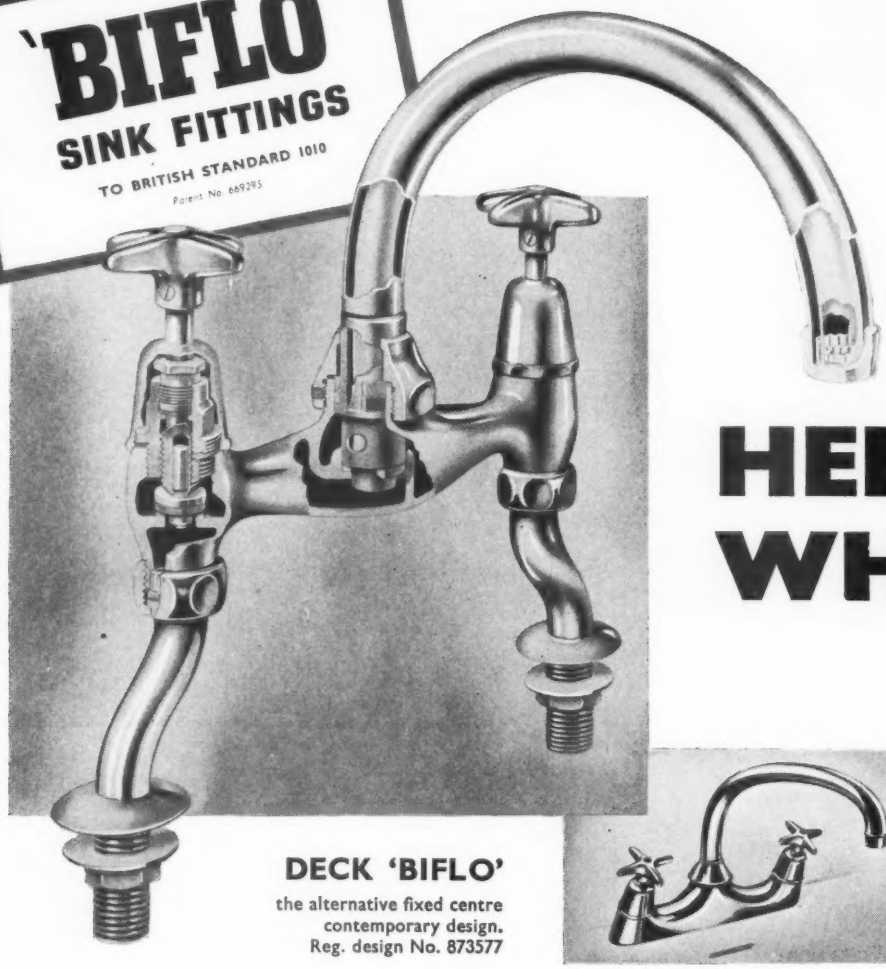
The Central Electricity Generating Board are just as concerned about this as they are about bringing in the power. For the nation has charged the Board with a double duty. Not only to maintain an efficient, economical electricity supply, but also to preserve the amenities of the country as they go.

That's why the new line will be planned so that it follows the dark background of a wood here; skirts a village there; crosses skylines in the most inconspicuous way to be found; and eventually reaches the town through its industrial suburbs.

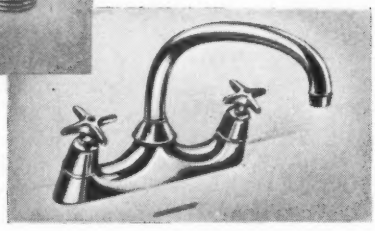
C.E.G.B

THE CENTRAL ELECTRICITY GENERATING BOARD

'BIFLO'
SINK FITTINGS
TO BRITISH STANDARD 1010
Patent No. 669295



DECK 'BIFLO'
the alternative fixed centre contemporary design.
Reg. design No. 873577



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WATER ENGINEERS ACCEPT 'BIFLO' FITTINGS FOR CONNECTION TO COLD WATER MAINS . . .

because—

Water Companies' Byelaws prohibit ordinary mixer fittings because these can create contamination of mains water. Two separate waterways for hot and cold water in the "BIFLO" prevent this danger. Mixing takes place immediately on discharge from the swivel spout.

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YOU CAN REDUCE HEAT LOSSES BY

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WITH THE THERMALON PLASTIC FOAM INSULATION SYSTEM

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THERMALON offers Architects, Builders and Heating Engineers a unique plastic foam insulation system for either existing dwellings or new buildings under construction.

THERMALON achieves unprecedented heat savings because the insulating qualities of the external structure are increased by over 300%. With over 40,000 buildings already completed we are now able to place our unrivalled experience at your disposal for 1961 contracts.

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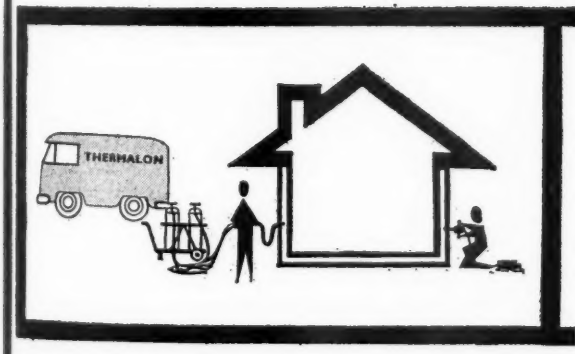

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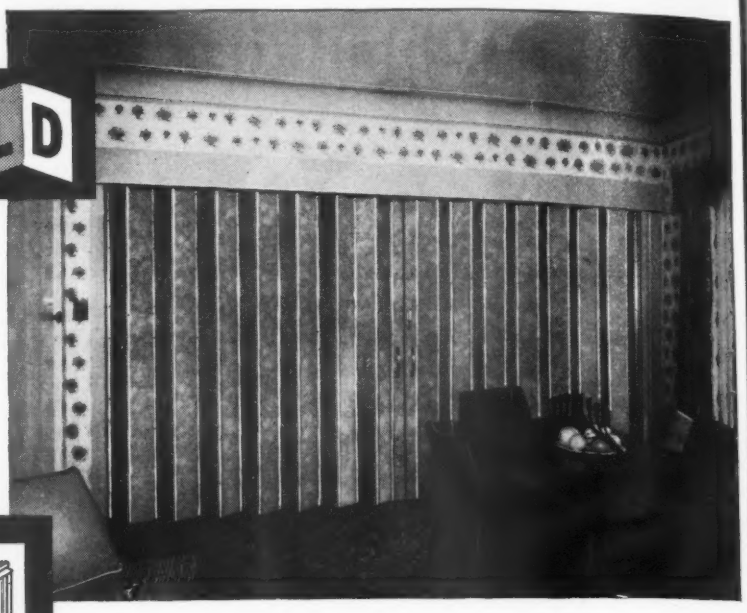

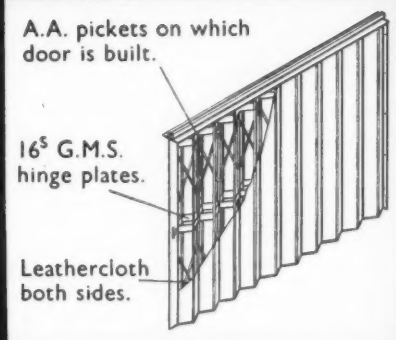

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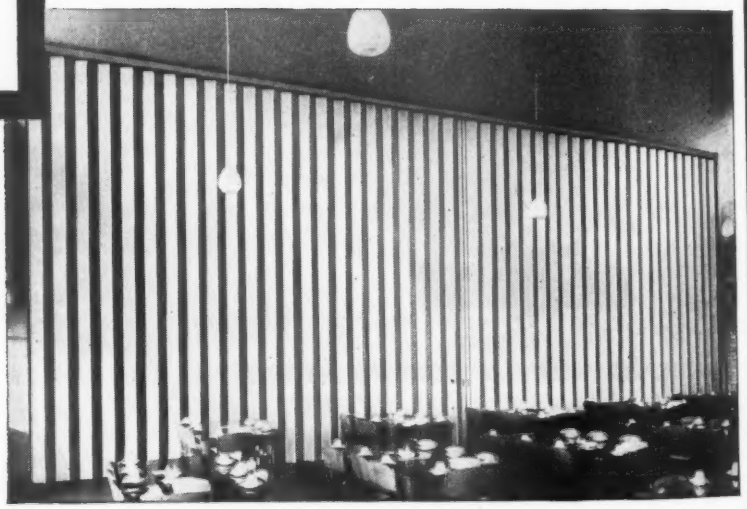

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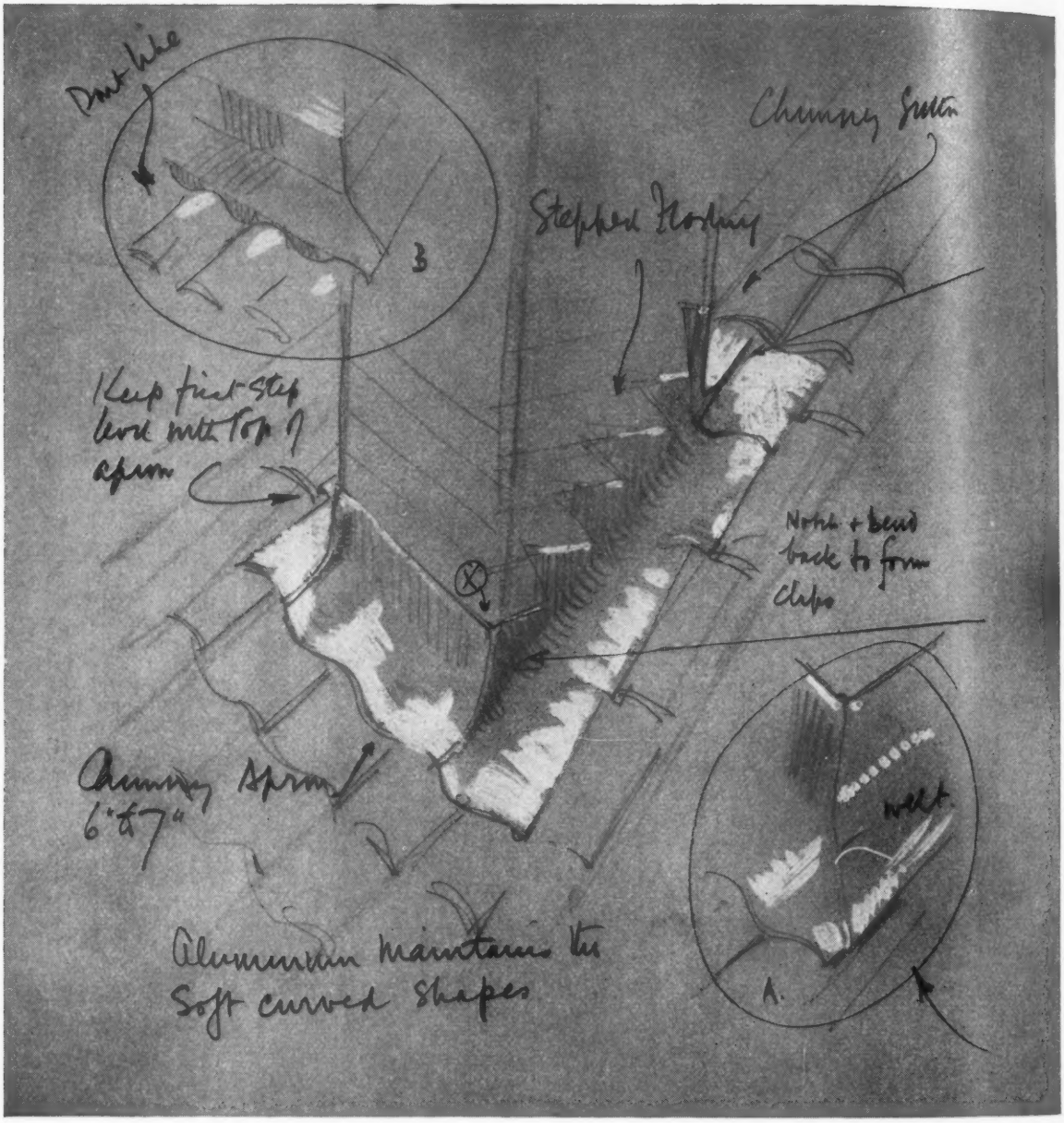
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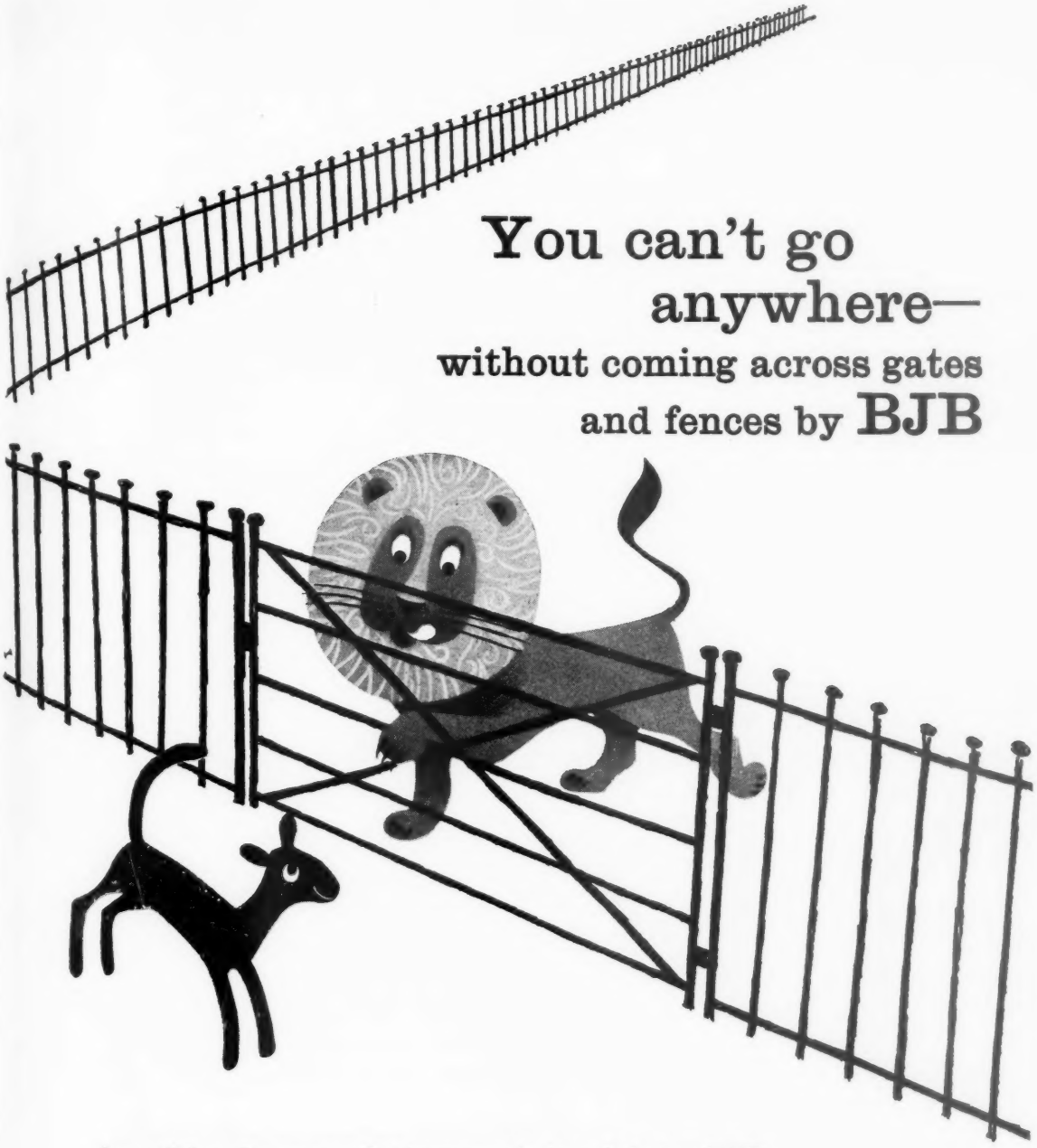

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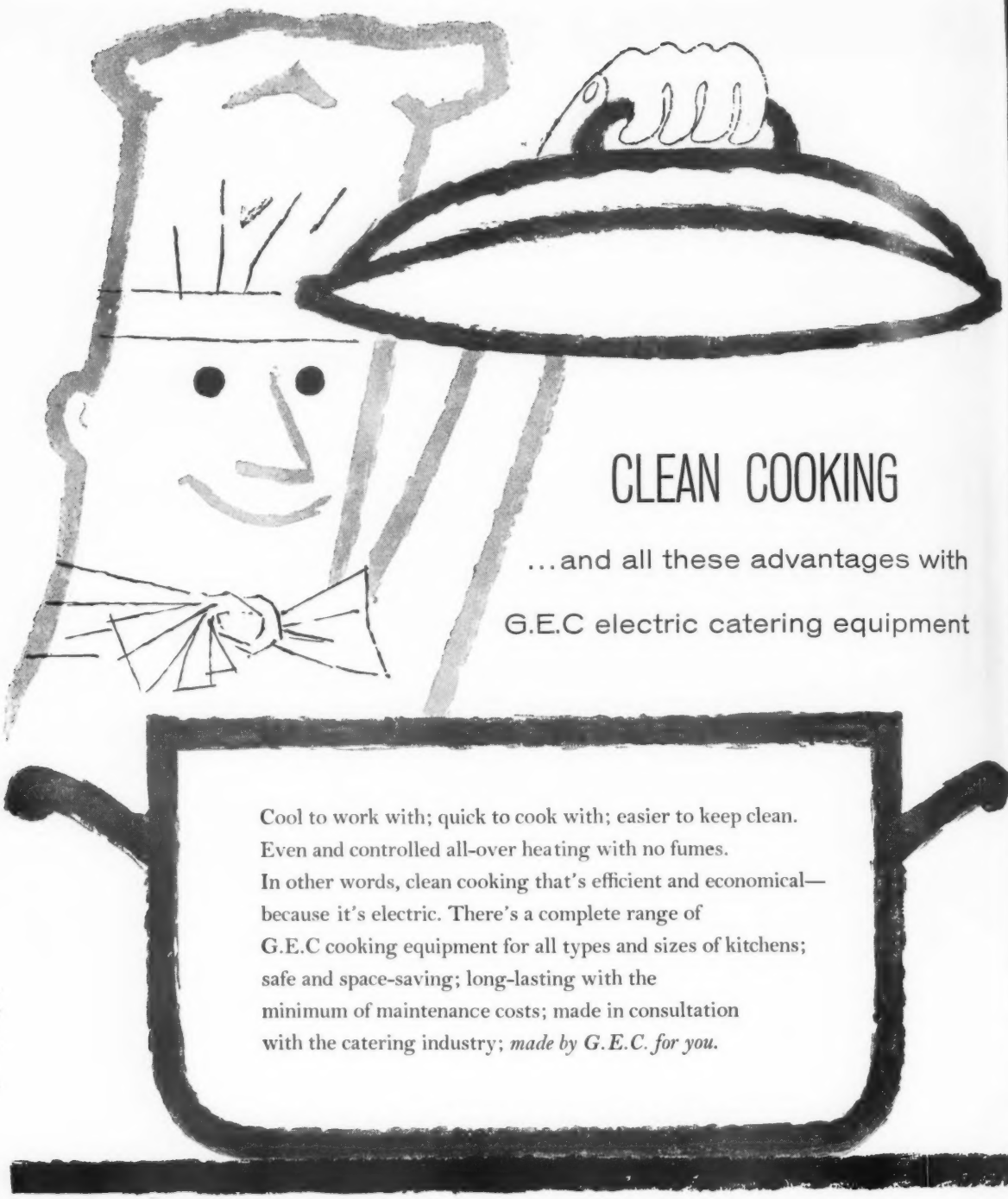

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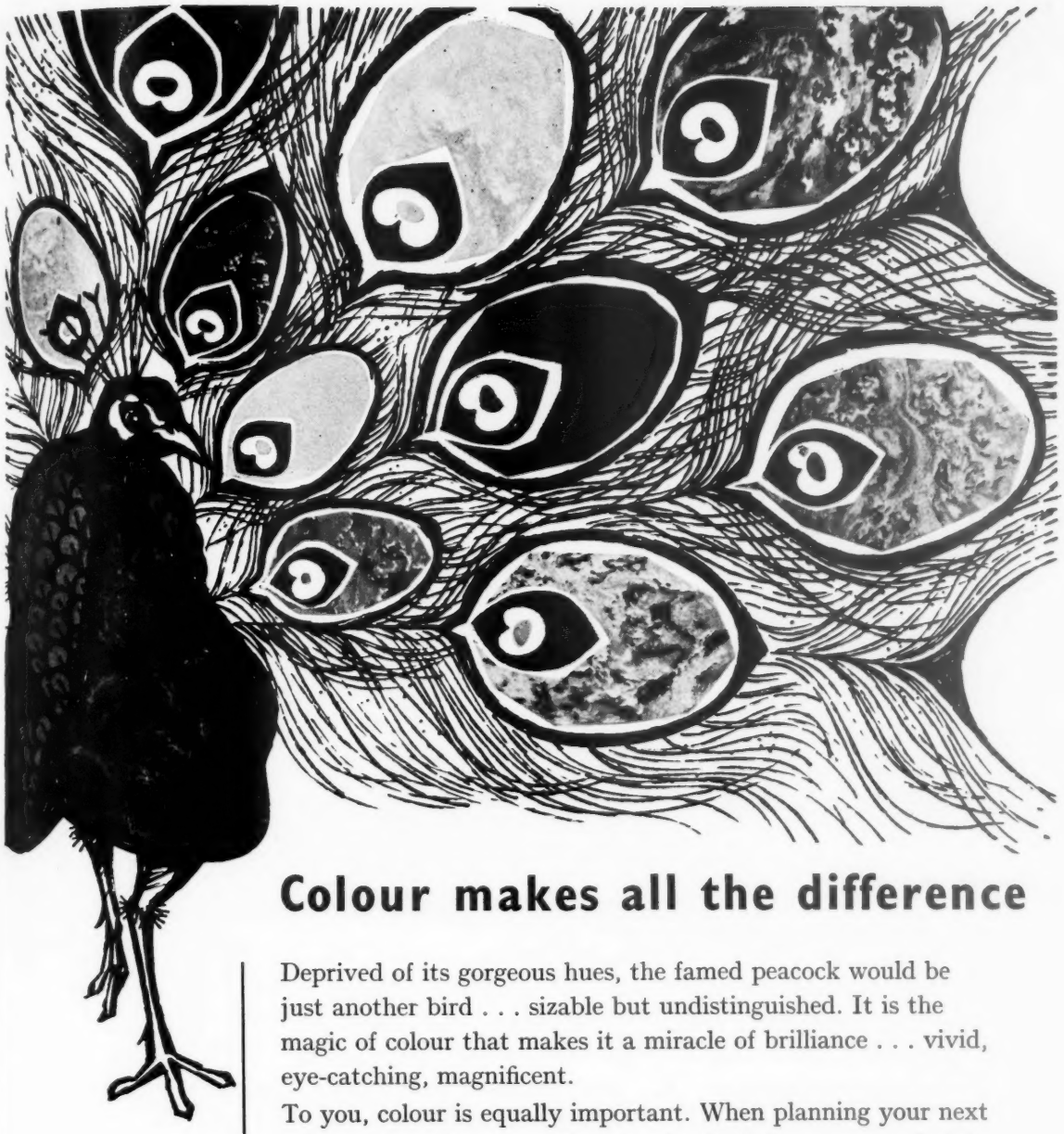

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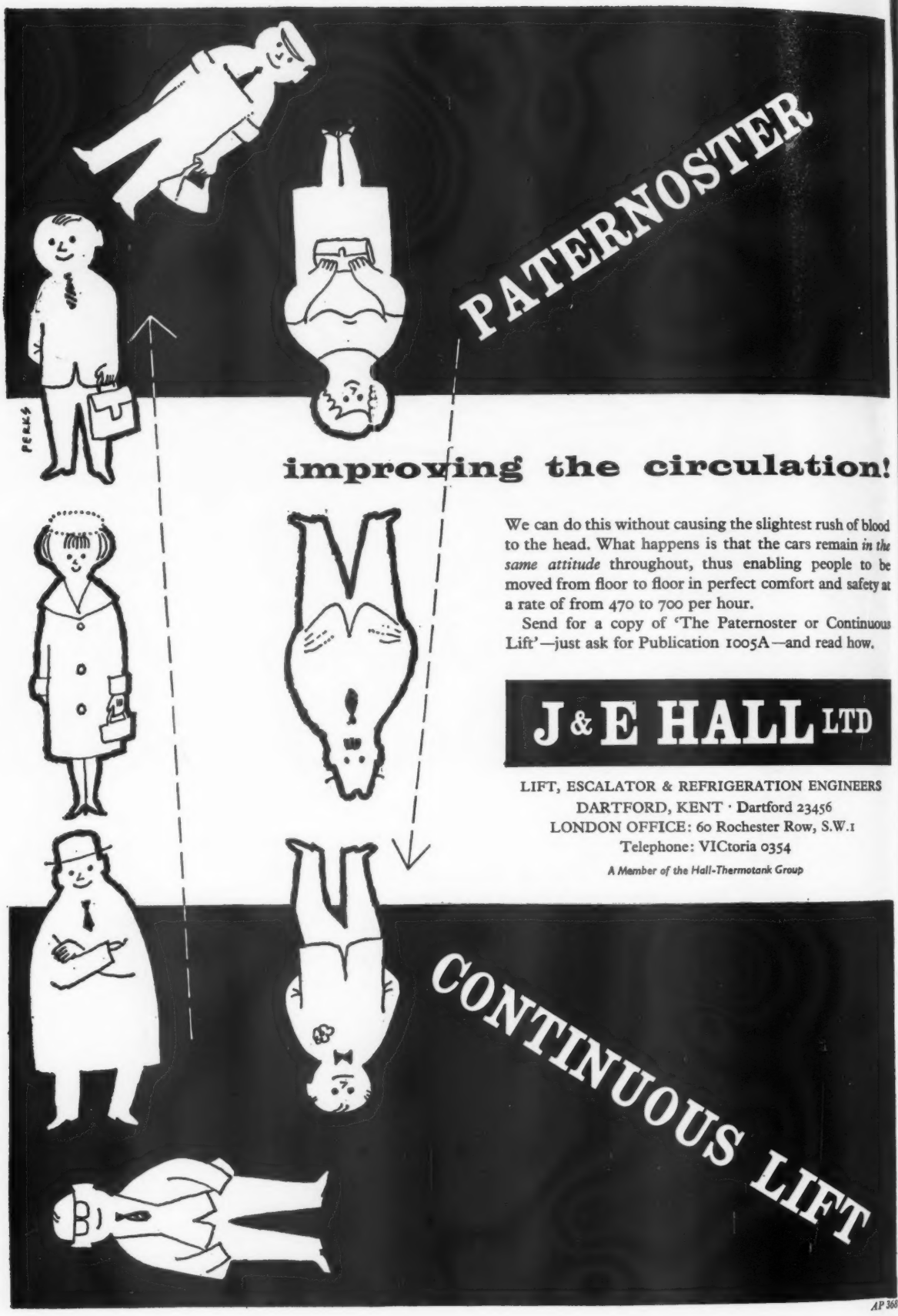
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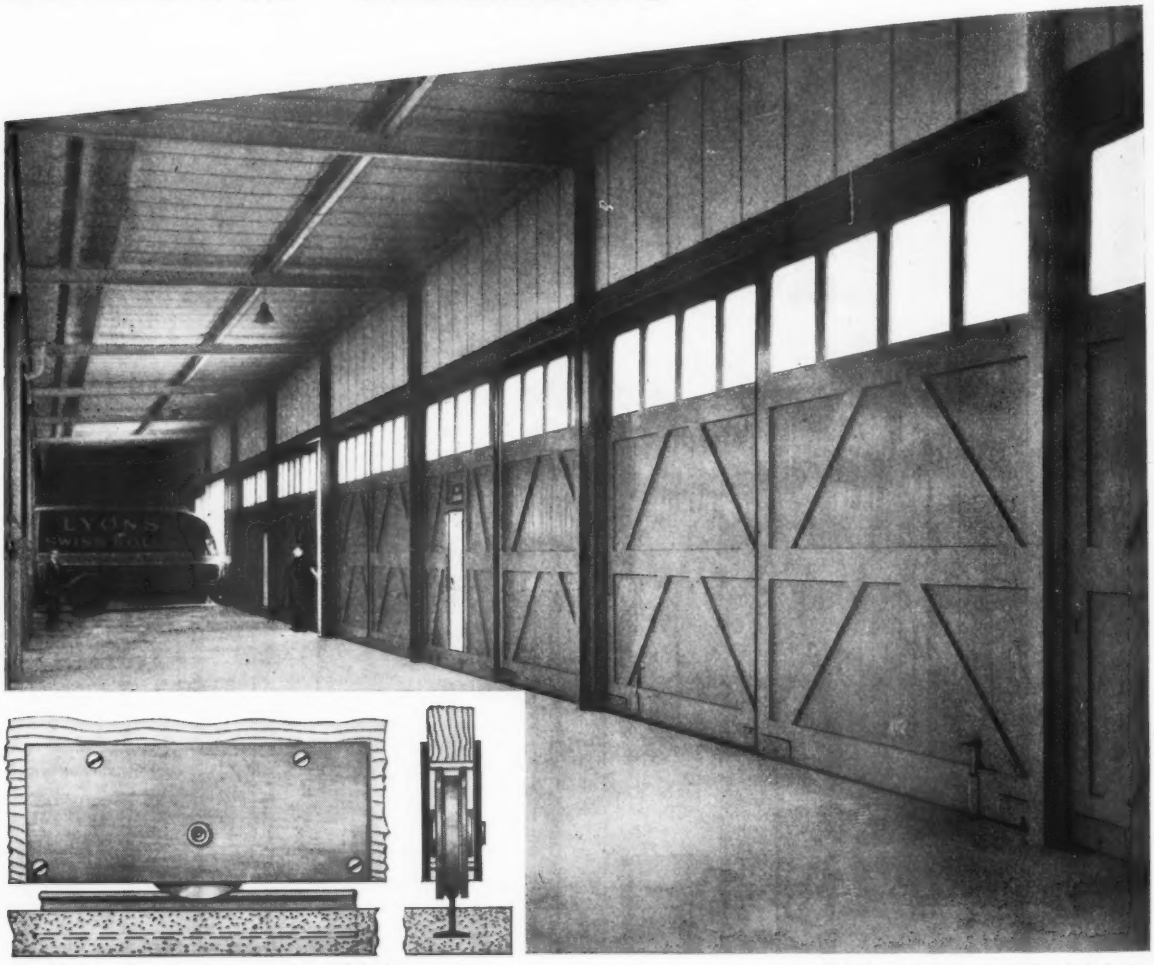

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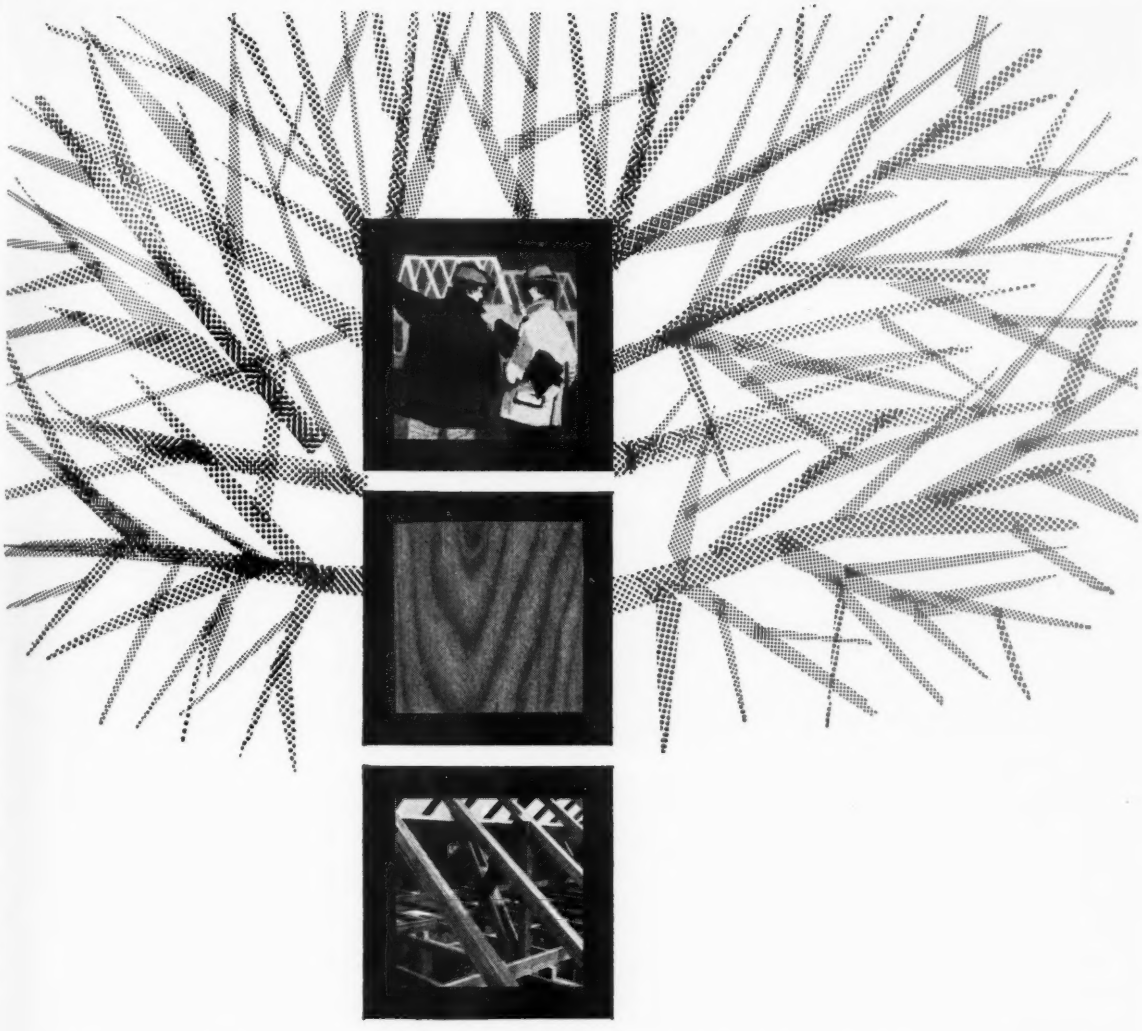

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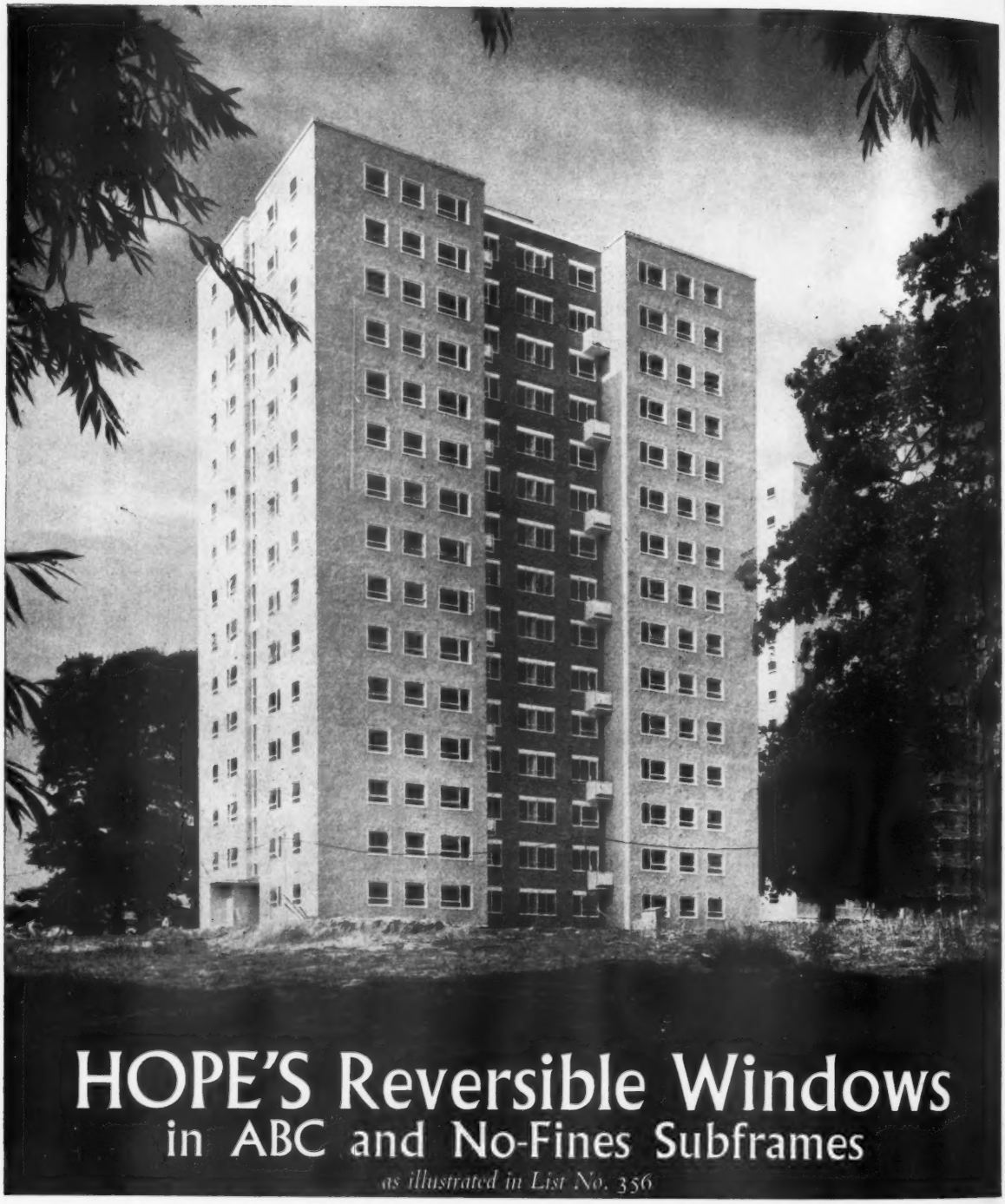

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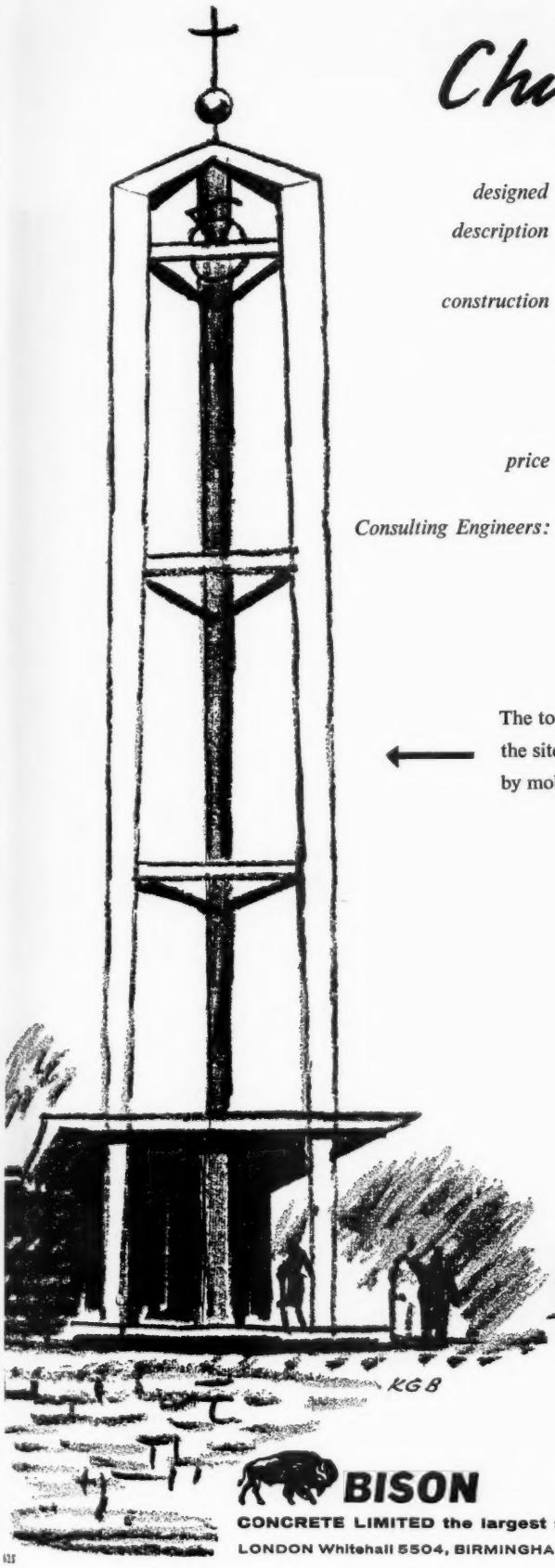

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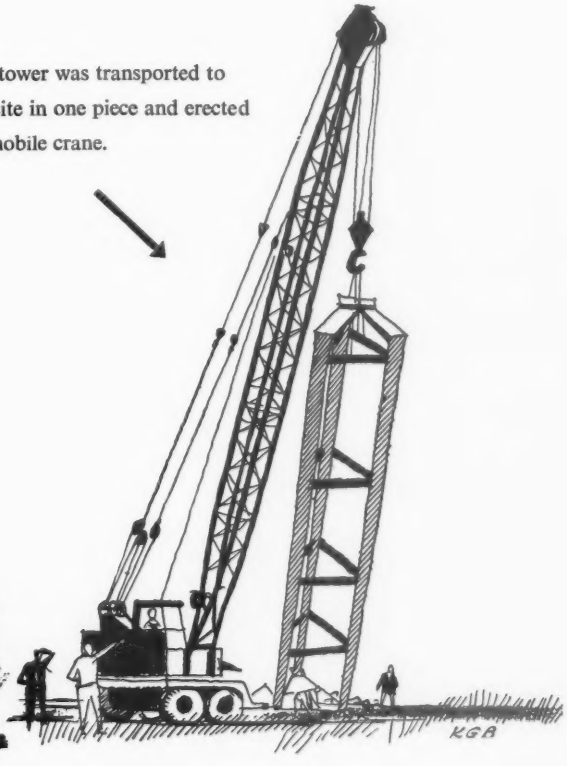

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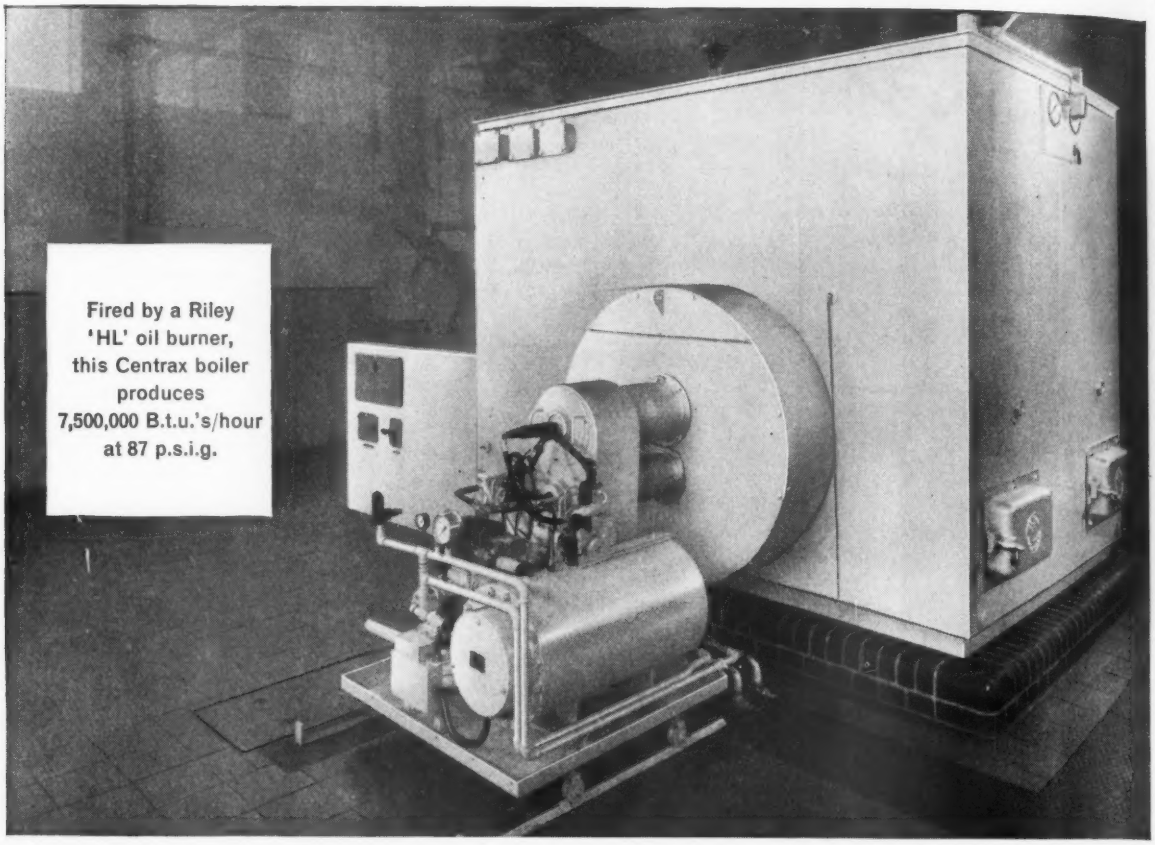

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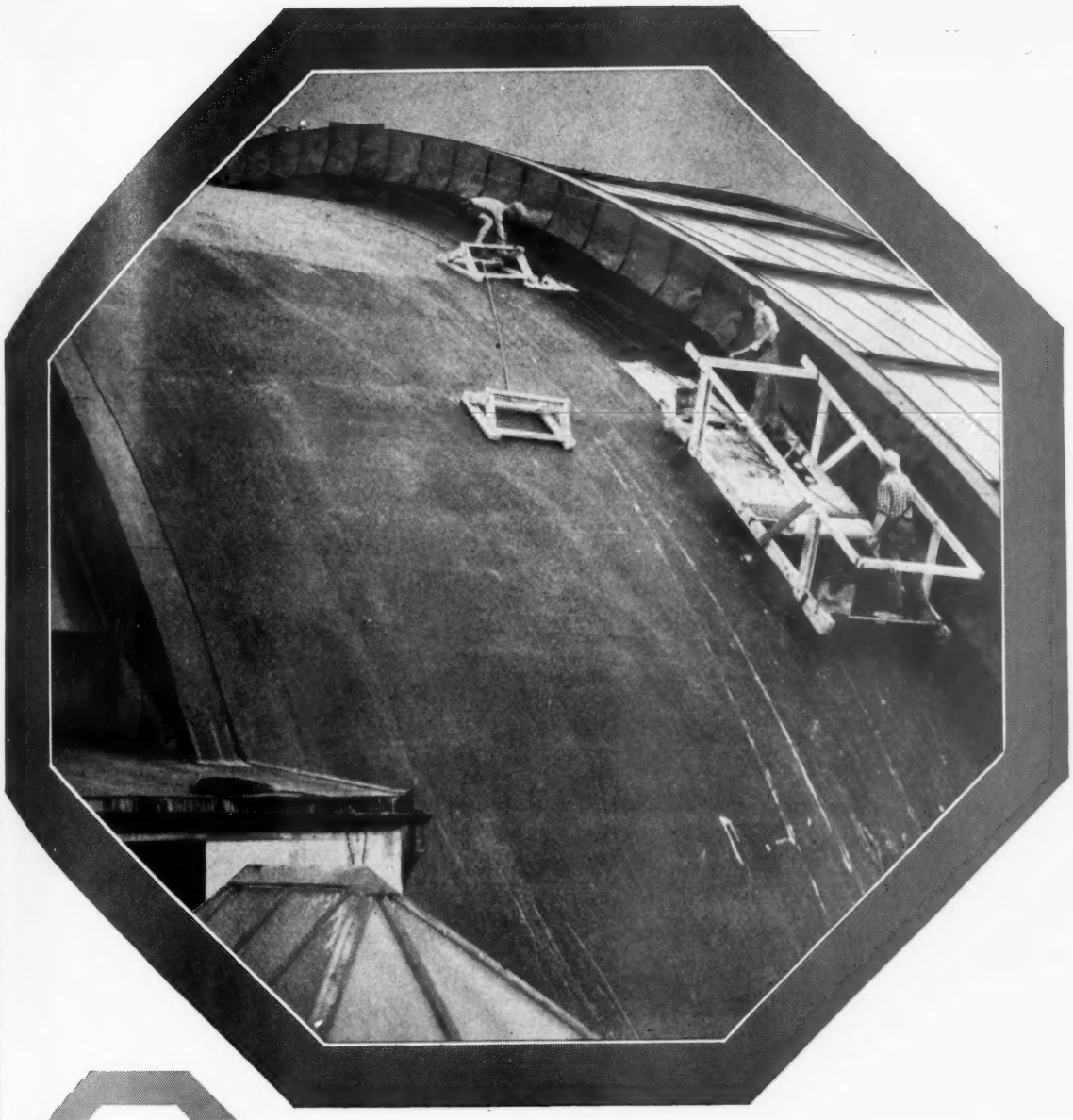

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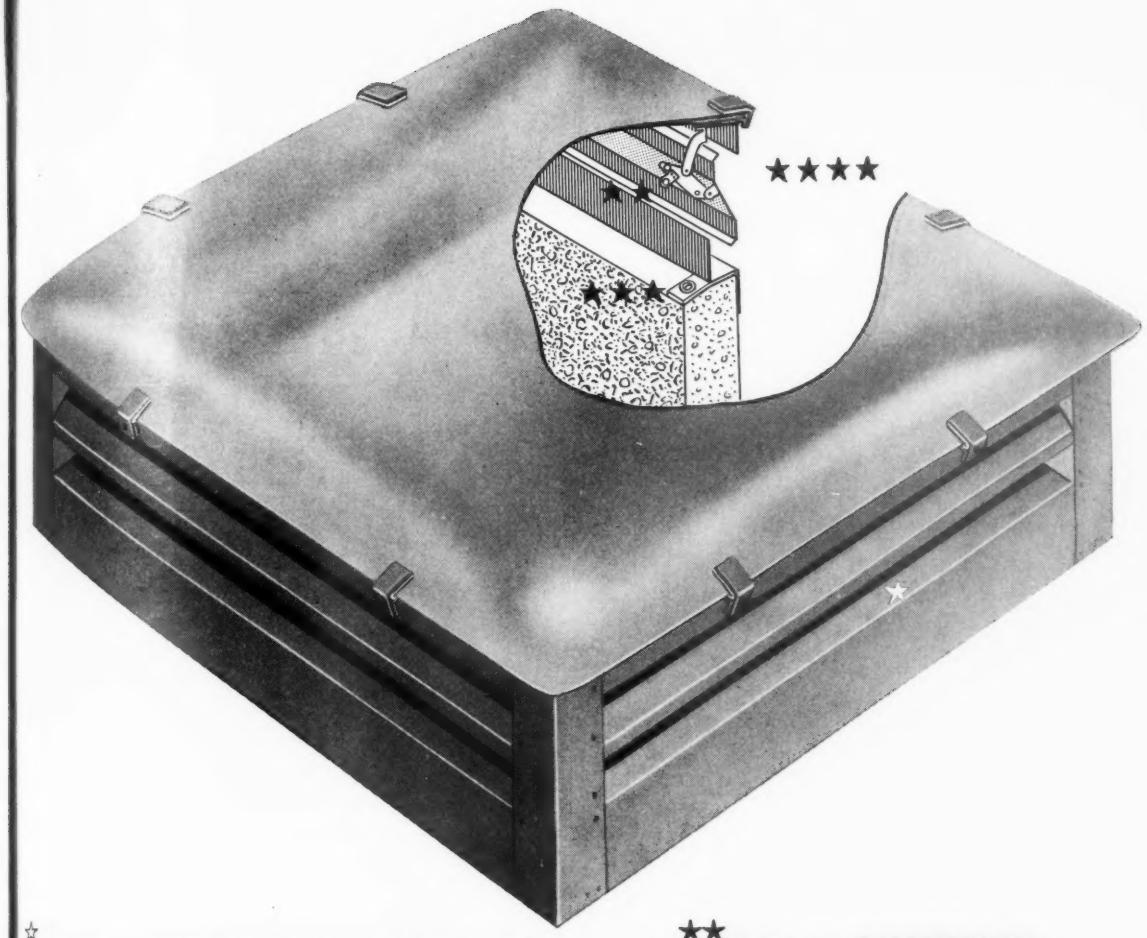

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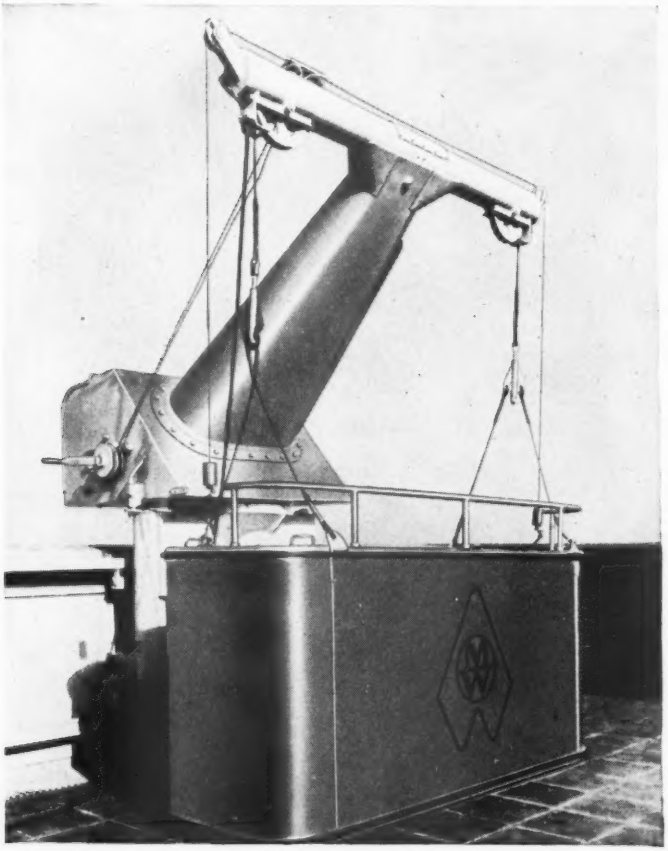

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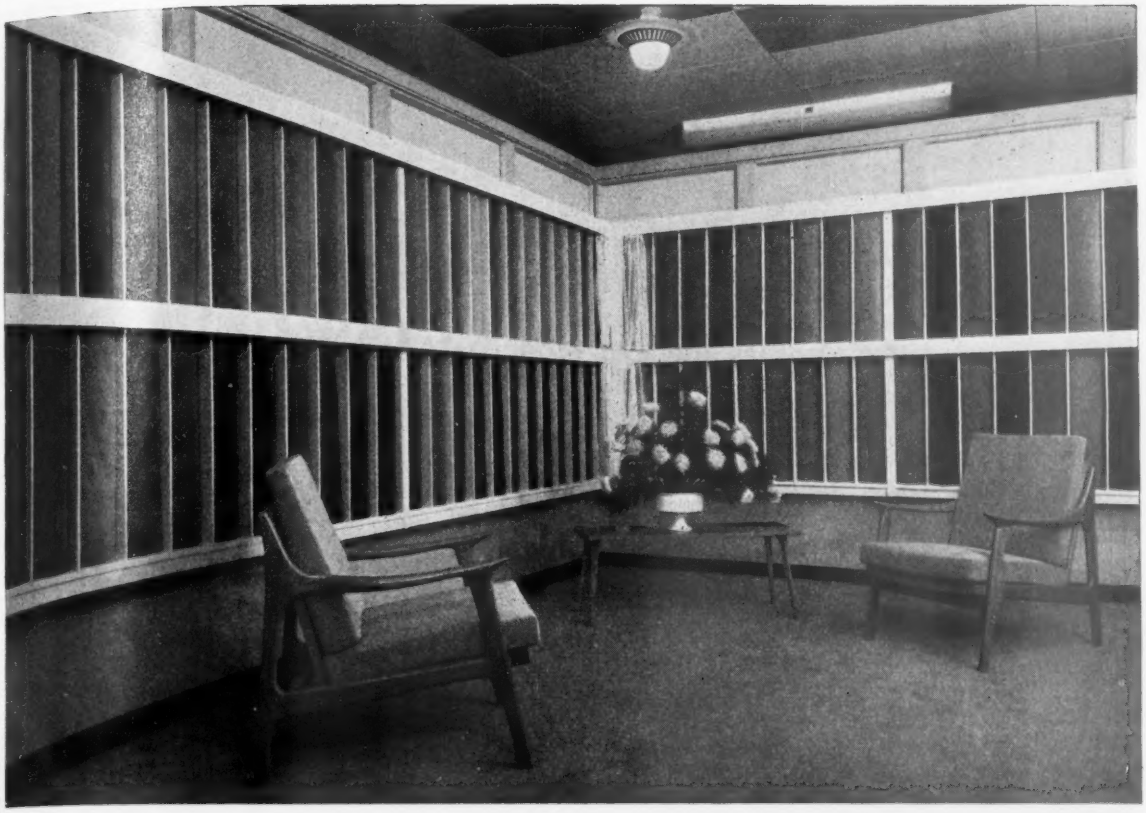

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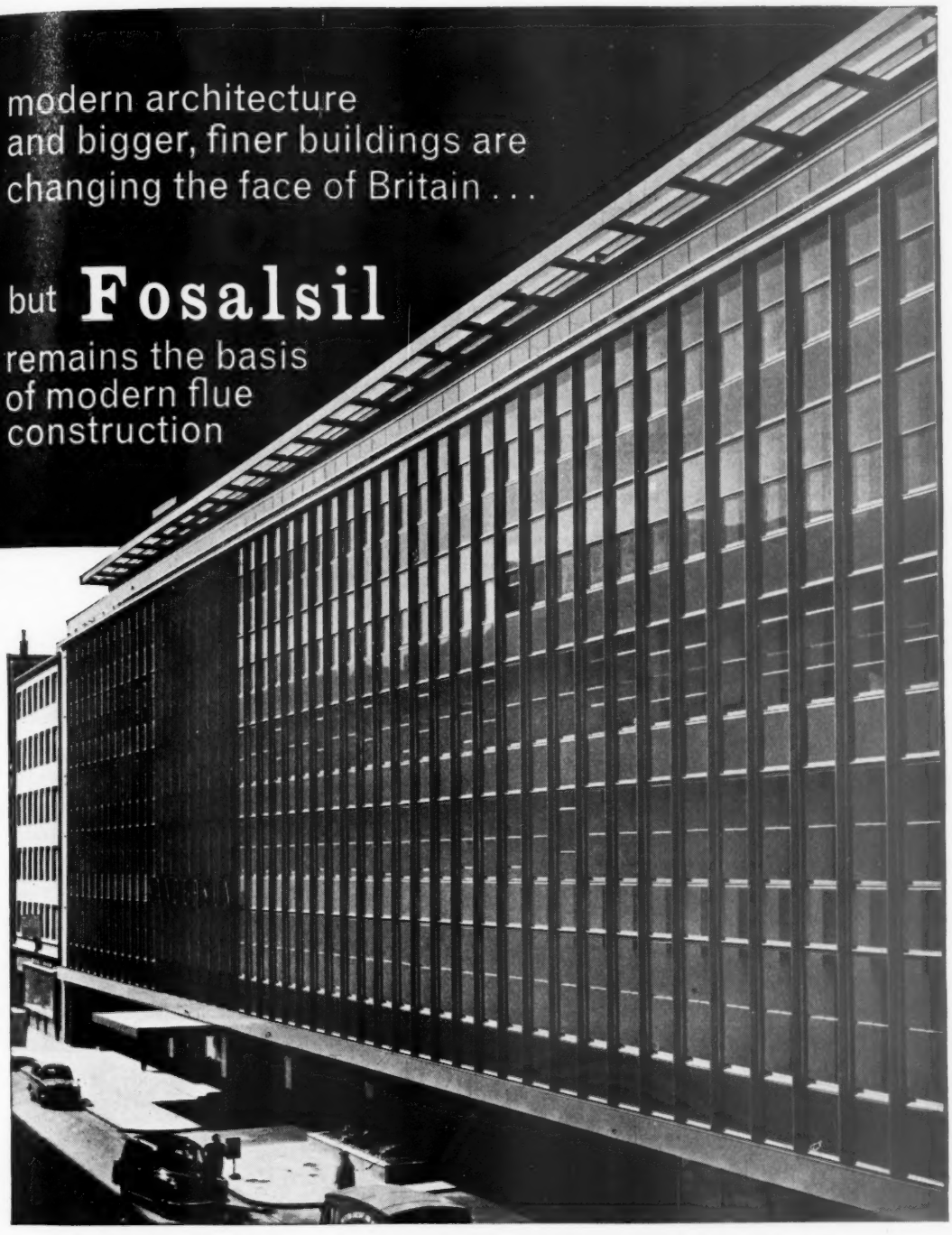

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April 1961
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Diary of Events

18 April, 5.45 p.m. for 6.15 p.m.	Junior Liaison Committee. An informal talk, with illustrations, on The Liverpool Roman Catholic Cathedral, by Mr Frederick Gibberd, CBE [*F*], Vice-President RIBA.
24 April, 6 p.m.	Library Group. Miss Ida Darlington, MA, FSA, FLA, will introduce an evening on The Records of the Metropolitan Board of Works.
25 April, 6 p.m.	Special General Meeting.
27 April to 13 May	Exhibition of the drawings submitted by the six finalists in the second stage of the competition for New Hospital, Boston, Lincs. Monday to Friday 10 a.m. to 7 p.m., Saturday 10 a.m. to 5 p.m.
9 May, 6 p.m.	Special General Meeting and Annual General Meeting.
17 May, 6 p.m.	Annual Discourse by Alistair Cooke.

Cover picture

'Big Ben.' Reproduced from the painting by Bernard Buffet by courtesy of the Lefevre Galleries

Building for the Public

Whether local authorities build well or badly matters a great deal. The phrase 'local authorities building programme' has a dry, stuffy, bureaucratic flavour, but schools and houses, swimming baths and old people's homes, libraries and public halls, street furniture and council offices, influence the lives and happiness of everyone. It is in this field, above all, that the architect's service to the client and his obligations to society coincide. Local authorities in recent years have spent between £400 and £500 million on new building, and their programmes are certain to continue on a large scale, while fluctuating in size and changing in character to meet new requirements. The quality, the quantity and the value for money of these immense programmes depends to a considerable extent on the way in which building is organised by the local authorities, controlled by the Government and served by the architectural profession.

The report of a Committee of the Royal Institute of Public Administration on *Building by Local Authorities*,[1] which was published last month, should be of great value to members of local authorities, and to their professional advisers, to whom it transmits a great body of experience from which the most valuable lessons can be learned. Admirably written by Mrs Elizabeth Layton, who was also responsible for the detailed investigations, it is an authoritative account of the findings and recommendations of 15 experts (only two[2] of whom were architects) who investigated the basic forms of organisation employed by local authorities for the design, construction and maintenance of buildings. If its recommendations are carried out the public will get better buildings for their money and a better environment for their activities, and architects will be in a stronger position to meet the challenge of the times.

Architects are painfully familiar with the archaic forms of budgetary and technical controls still operated by some ministries. The report now places an invaluable weapon in the hands of all those who are trying to persuade the other ministries to adopt the methods of control pioneered by the Ministry of Education which are the only ones, according to the report, both to satisfy the requirements of certainty and clarity, and to leave a wide measure of discretion to local authorities. If other ministries were to fix building programmes well in advance, and prescribe minimum standards and clearly defined cost limits for different kinds of buildings before design starts, the local authorities would be able to organise their work more efficiently and economically, for 'nothing is more wasteful than last-minute changes in design to secure superficial economies in cost'. While it is encouraging that other departments have now begun to follow the Ministry of Education's lead, there is still a big leeway to make up, and the Home Office, in particular, is shown to be lagging at the starting post.

There is room for argument among architects about the report's recommendation that the chief officer who is responsible for the architectural services (whether he be Engineer or Architect) should be responsible to one particular committee, to whose chairman he can turn for advice and support. But more important are the findings of the committee on the division of responsibility between Engineer and Architect. The Committee found that the point at which a local authority decides to divide the functions of the Engineer and the Architect into two separate departments is an important stage in its growth. It pointed out that the administrative advantages claimed for a combined department are often unconnected with the technical qualifications of the Engineer, but derive mainly from administrative skills and personality. The Committee's view was summarised as follows:

'A combined department simplifies co-ordination, but may adversely affect architectural quality. If the size of the authority and its building programmes justify it, there are advantages in separating the architectural from the engineering services and in appointing a Chief Architect. By this means more able architects and better junior staff are likely to be recruited. Such a team may be able to bring about improvements in the quality of the architectural work and in cost planning and research which could far outweigh the dis-economies due to having two departments. Authorities are urged to consider the setting up of separate Architect's departments under a Chief Architect if the volume of the architectural work would justify such an arrangement'. The report quotes the experiences of local authorities, including non-county borough and urban district councils with populations as low as 40,000, whose building programmes have justified this course.

The inquiry revealed an unexpectedly strong body of local authority opinion against the employment of private architects, who are employed in the main from necessity rather than from choice. A part of the blame for this is laid by the report on 'those architects who are unbusinesslike and who have done the reputation of their profession a disservice', but the larger fault lies with the local authorities which give the private architect the rushed jobs, with insufficient time and inadequate briefing. It urges local authorities to give a regular proportion of their work to private architects, so as to provide the stimulus of fresh ideas, and to give the architect adequate time to prepare his plans, clear instructions on the authority's procedure and administrative arrangements, a cost target, a clear but flexible brief, and direct access to the committee to explain his plans. This might be described as 'The Private Architect's Charter', and could with advantage be hung up in every local authority office, particularly those which have still to learn that the fastest job off the drawing board is not necessarily the cheapest or the quickest in the long run.

Many architects will welcome the forthright warnings given by the Committee about the dangers of the 'all-in' contract, but they will also have to notice that the Committee regarded the 'all-in' contract as a challenge

[1] George Allen and Unwin, 40*s*.
[2] Dr Ronald Bradbury [*F*] and Mr Clifford Culpin [*F*].

to all concerned to achieve equal efficiency and integration by other means. The report notes the 'attractive simplicity' of the 'all-in' service to the client who is not accustomed to using professional staff, but points out that this does not apply to local authorities. It warns against two dangers: that the client loses the services of the architect, independent of the contractor, to protect his interests, and the serious risk that the 'all-in' contractor will usurp the client's function of settling the requirements of the building. On the other hand, the report describes the 'all-in' contract as a manifestation of the pressing need to get the different sides of the building industry to co-operate more closely for efficiency, and strongly recommends the wider adoption of the negotiated contract, and the improvement in procedures for competitive tendering to give the contractor more time and information.

A most valuable chapter on research and development brings out clearly the historic significance of the pioneering work of the Ministry of Education's research and development group, and the need to extend this work in other departments. It urges the strongest support for the new group in the Ministry of Housing and Local Government, and advises the Home Office to undertake or to sponsor development work. In the local authority field it regards the CLASP consortium as the outstanding example of collaboration, as great a step forward in its own field as the Ministry of Education's development group, and advises other groups of authorities to adapt the CLASP model for their own purposes, if they wish to obtain financial and technical benefits which are beyond the reach of single authorities. The report has the merit of making it clear that CLASP has made two contributions, one a system of collaboration to get the advantages of scale and specialisation, the other a constructional system; for authorities which do not wish to adopt the system of construction may nevertheless profit from a consortium.

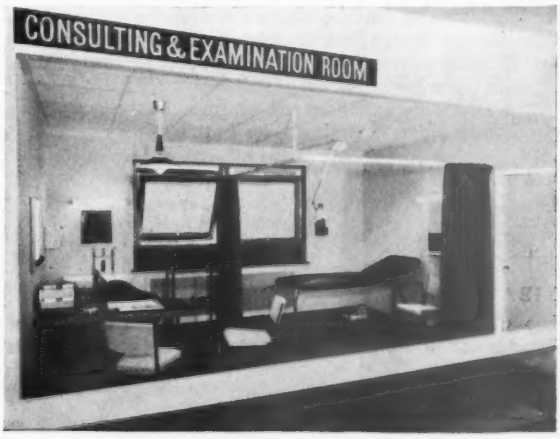
It is on the score of cost control and efficiency that architects are shown by this report to be most vulnerable. Nobody can dispute the Committee's view that 'to design buildings efficiently the planning and control of costs from the outset are essential'. The report acknowledges the work of the RIBA in stimulating interest in cost research and cost control, but there is no room for complacency when the report states categorically that cost planning and control during the design stage are so far practised only in a small minority of public and private offices. Much responsibility lies, of course, on the ministries and local authorities which can stimulate cost planning by themselves laying down cost limits or targets derived from their own building experience. But architects, however pleased they may be with the greater part of this report, cannot afford to be smug. Weakness on costs and efficiency could prove to be the profession's Achilles heel.

An exhibition of Materials and Finishes Modern Hospital Building opened at the Building Centre on 10 March and closes on 8 April. One section of this excellent exhibition is illustrated. It was arranged by Mrs Neville Conder [*A*]

Firm price tendering

We give below the Press Statement issued on 23 February by the NJCC of Architects, Quantity Surveyors and Builders, which many members will have already read elsewhere. There are two points that should be made. First, this is a problem for the whole industry and not just for the Builders. Firm Price Tendering has the strong backing of the Government as part of its plan to hold prices stable; it is advantageous to the client, and it reduces the work of Architect and Quantity Surveyor. All will suffer if the tendency to revert to the use of the Fluctuations Clause develops further.

Second, this is primarily an organisational, not an economic problem. It cannot be said that rising prices have been a major problem in Firm Price Tendering during the past three years. The MOW index of the cost of new construction has risen only from 112 to 114 between the beginning of 1957 and the end of 1960, and materials prices have been remarkably stable. (Before the War when Firm Price Tendering was general, building costs were rising at the rate of 2–3 per cent per annum.) There are signs that this situation may be changing. The wage rise scheduled for October can perhaps be allowed for by builders' estimators, but some materials' prices, led by bricks, are beginning to move upward. Nevertheless, the main obstacles to wider use of Firm Price Tendering have lain in organisation rather than costs. The two main issues raised in the NJCC Statement – the need for prompt consideration of tenders and full planning of projects in advance – pinpoint the frequent lack of modern management techniques in the industry. The public authority whose red tape takes months to unravel, the architect or quantity surveyor who does not provide drawings or measurements in accordance with a programme, the builder who cannot organise the use of his plant and staff efficiently, even when all the information is available, all help to put building costs up. This is a 'buck' the industry and its clients cannot pass on. The NJCC has done well to restate the obligations of all concerned.



Council Business

The Council met on 14 March with the President, Sir William Holford, in the Chair. The following notes are from the Secretary's report.

RIBA Hospitals Course Handbook. The Handbook has been published, and some 450 copies have been distributed free to those who attended the Course. Fifty complimentary copies are also being sent to the speakers, architectural and medical press, and so on.

The remainder of the 1400 copies printed will be sold at 36*s.* 6*d.* (including postage). As there were already funds in hand from the Hospitals Course to cover the 450 distributed to Course members, and 265 orders have already been received, the production costs (about £900) are now covered. Any further sales will therefore accumulate some profits for the Technical Information Service.

This first attempt at a self-supporting project on the part of the new Technical Information Service will be watched with interest. Several European institutions are among those who have placed orders, and in a month or so an analysis of all orders placed will be reported to the Council.

RIBA Quarterly Survey of New Work reaching Architects' Offices. From now on the National Institute of Economic and Social Research will be publishing our Quarterly Survey of new commissions received by private architects. This is something of an accolade, in that it amounts to official recognition of our figures as of general interest, and of sufficiently long standing to be soundly based and reliable.

British Architects' Conference 1962. The theme for the Conference to be held in Coventry in July 1962 is 'Building and Planning in the Motor Age'.

More time will be devoted at this Conference than hitherto to discussion, and it is intended to break down the main subject into three or four sections, each of which will be dealt with by a discussion group, who will report back to the main Conference.

The organisation of an exhibition to illustrate the Conference theme is being studied.

Points from Routine and Other Business

Lectures on Arbitration. The Institute of Arbitrators has asked whether the RIBA would be prepared to support (not financially) an initial course of lectures in London arranged by that Institute 'to outline in a practical manner for architects the law and practice of arbitration from submission to award'. The Council having given approval, the Practice Committee will discuss details with the Institute of Arbitrators.

RIBA Award for Distinction in Town Planning

The Council at their meeting in January, asked the Committee for the Award to consider whether any change in the regulations for the Award was desirable or necessary to provide for the consideration of members in the public services engaged on town planning work.

The regulations as revised and approved by the Council are given under Notes from the Council Minutes on page 223.

Admission to Alliance

The Council gave approval to the admission as Allied Societies of the North Lancashire Society of Architects and of the Jamaican Society of Architects.

RIBA Finances

The Council also approved the recommendations of the Finance and House Committee in their statement on Accounts for 1960 in Relation to Mortgage on Building and Allocation of Surplus. The statement will be published in the May JOURNAL.

RIBA Topics

RIBA Scales of Fees for State-Aided Housing Schemes and State-Aided Multi-Storey Flats

The Council have decided that the Scales for State-Aided Housing Schemes and State-Aided Multi-Storey Flats be withdrawn on 31 May 1961. From 1 June 1961 the normal RIBA Conditions of Engagement and Scale of Professional Charges will apply to all work previously covered by the RIBA Scales of Fees for State-Aided Housing and State-Aided Multi-Storey Flats.

As housing involves a repetitive use of type drawings which is not contemplated by the Scale of Professional Charges, an Application of the Scale to work in respect of repetitive housing has been drawn up and will be effective from 1 June 1961. This will not affect the arrangements sanctioned by the Council in 1959 for work in connection with private housing development in which the fee is based on the selling price of the house to the public.

The Application will be published in full in the RIBA JOURNAL for May, and copies will be obtainable from the Secretary, RIBA, in the middle of that month.

RIBA Prizes and Studentships

On the invitation of the President, Mr R. Furneaux Jordan [*A*] has undertaken to give the Criticism of the drawings submitted in competition for the RIBA Prizes and Studentships, 1961–62.

Firm Price Tendering

The National Joint Consultative Committee of Architects, Quantity Surveyors and Builders[1] considers it desirable to restate the obligations of all those concerned with firm price tendering. The conditions to be observed in firm price tendering have been endorsed by the Ministry of Works.

When a firm price tender is submitted prompt consideration should be given to it, and a decision communicated to the tenderers as soon as possible within a maximum period of two months. Facilities should immediately be given to the successful tenderer to enable him to put the work in hand. It must be recognised that the tender is calculated with reference to the prices ruling at the time of the tender and to the availability of staff, labour, materials, and plant. The builder can only gauge the market for labour and materials over a limited period so that the estimated contract period for a firm price tender should in no circumstances exceed two years.

There must be thorough planning of each project. The builder should be provided immediately by the professional advisers with sufficient information to enable him to programme the job. All drawings, details and other instructions should be made available to the builder as required for him to start and maintain the orderly progress of the works. The builder should be notified promptly of the nominations of sub-contractors and suppliers whose tenders should be on a firm price basis wherever possible. Variations should be kept to a minimum.

If full advantage is to be obtained from firm price tendering, the above conditions are of vital importance. Failure to comply with these conditions undermines the whole basis of a firm price contract.[2]

[1] The National Joint Consultative Committee of Architects, Quantity Surveyors and Builders was set up in 1954 by the Royal Institute of British Architects, the Royal Institution of Chartered Surveyors and the National Federation of Building Trades Employers to keep questions of general policy affecting the building industry under regular review.

[2] Attention is also drawn to the Code of Procedure for Selective Tendering published by the Committee in 1959 and obtainable from the Committee at 66 Portland Place, W1.

(Further information may be obtained from the Secretary, National Joint Consultative Committee, Mr A. M. Lewis, at the above address.)

RIBA Publications

At the Council meeting of December 1958 it was decided that all the Institute's publications should be changed to Continental Standard paper sizes – the 'A' series. At the same time it was decided that the whole of the Institute's publications, stationery and other printed material be re-designed by a professional designer and Mr Herbert Spencer, FSIA, was appointed. A sub-committee of the Public Relations Committee has worked with the typographer, and the programme of design work is now completed. Although it will be some time before all of this is in print, the PRC thought it would be of interest to members to see the work so far and a small exhibition arranged by Miss Thomson is on display on the second floor at the RIBA until 14 April. It is hoped to have it on show again later.

Changes at the AA

The announcement in which the Council of the AA say how the administration is to be rearranged so as to increase the closeness of the link between the Association and the School, is given on page 222.

Members will have read with interest of the appointments of Mr Edward Carter [*A*] RIBA Librarian 1930–46, as Director, and Mr W. A. Allen [*A*] as Principal of the School, both of whom have given outstanding service to the RIBA in their respective fields.

To the retiring Secretary, Mr H. J. W. Alexander, the JOURNAL wishes many happy years of leisure.

Cover Picture

The re-designed first page, in addition to restoring the contents list, also gives the subject of the cover picture, the previous cluelessness of which has annoyed many members.

M. Bernard Buffet although almost certainly unaware that the Clock Tower was found last February to be 15 in. out of perpendicular, has nevertheless conveyed this in his painting, one of a series on London recently exhibited at the Lefevre Galleries.

Measuring devices installed by MOW have not recorded any further significant movement in Big Ben tower since.

Responsibility of the Job Architect

Copies of a verbatim report of this discussion meeting, which was held at the RIBA on 21 February, are available price 2*s.* 6*d.* post free on application to Mr Anthony Williams, Assistant Secretary, RIBA, 66 Portland Place, London, W1.

Joint Meeting with the Civils

Embarrassingly few architects turned up at the ICE on 7 March to hear two admirably complementary papers on 'The Housing of Large-Scale Plant' given by Mr H. V. Lobb, CBE [*F*], and Mr W. S. Atkins of W. S. Atkins and Partners, Consulting Engineers. By invitation Sir William Holford took the Chair. The papers having been circulated before the meeting, the two main speakers had time during their introductory speeches to show slides, many of which were both visually exciting and impressive.

Mr Lobb's colour slides of nuclear power stations were chosen to illustrate his point that the architect had it in his power to exploit the dramatic scale of these huge complexes by so siting them and designing their envelopes that they and their surroundings reacted in a complementary manner. He talked about colour and materials in this context, and also stressed the importance of considering the human factors involved, both of those employed and those who were anxious about the fate of the unspoilt landscape.

Mr Atkin's paper as was to be expected, dealt mainly with the expertise involved, but ended on the note that whether large-scale plants were erected in steel or as concrete structures, the aesthetics of the structural outline were already becoming a constant demand on the engineer, yet only a limited number of them had a flair for good proportions. He countered the suggestion that it was the architect who showed concern for the human aspect while the engineer was preoccupied with the material side, by saying that only the man who had a complete grasp of the plant processes could plan the production line and layout for human convenience and well-being.

Once again the engineer/architect relationship was discussed – or would 'worried at' be a better description? There was of course plenty of support for the team spirit with the client being made to understand that all its constituent members needed to be appointed together at the outset if the best results were expected, and that the only date that mattered was the completion date. In this set-up the 'bossman should be the best man', architect or engineer whichever it happened to be.

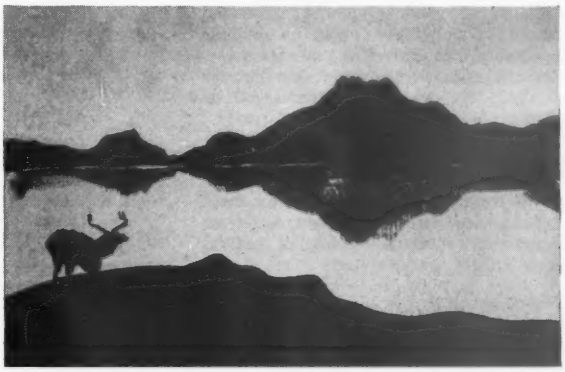
The other now familiar approach was that the nature of the job should decide the leadership. If the value of the engineering work exceeded that of the architecture, the engineer would be in overall control and vice versa.

In practice the process appears to be working out according to the temperament of the individual. Those who like co-operation and joint responsibility are gravitating to the team solution, while the individualists carry on as usual, unimpressed by the claims of engineers to have an aesthetic sense as it is understood outside their profession, or architects to any trustworthy practical ability.

It was perhaps a pity that there was not time for discussion in more detail as to what extent large plant complexes could stand un-clad and in what climatic ranges. Mr Edward Mills, who was reminded that the weather in Texas is not that of the British Isles, suggested looking at large-scale plant through the eyes of a modern sculptor and approaching the design from this new angle. This is an intriguing suggestion since much of the hostility to the appearance of power-stations and similar structures is probably due to difficulty that the eye has in coming to terms with their appearance, already prejudiced by their siting in magnificent and hitherto unspoilt scenery. This might be resolved along the lines adumbrated by Edward Mills.

The architect, therefore, has not only to learn a language common to his technical colleagues – this was regarded as essential – but must have eyes in the back of his head to pick sculptors and landscape architects to add their skills to the others. As Mr Lobb said in his paper 'It should never be forgotten that the British landscape is almost wholly man-made and that it is continually being re-made. The duty of this generation is to make it as well as possible.'

The kind of environment that some of the nuclear power stations are sited in is exemplified in the wash drawing by Sir Edwin Landseer (godfather of Sir Edwin Landseer Lutyens who preferred to be called Ned). It is one of the pictures in the controversial exhibition of Landseer's work in the Royal Academy Diploma Gallery.



New work for private offices in the fourth quarter of 1960

Taking the year as a whole, 1960 was a good one for private architects. The total value of new commissions received by private architects for both public authorities and private owners and developers throughout the year rose by one quarter from the level in 1959. In particular, the amount of new work put out by public authority architects' departments to private architects was almost one and a half times as great as in 1959; much of this increase was in new hospital building. New work for private owners and developers in 1960 increased by one-fifth over the previous year.

The last quarter of 1960 gave no sign of any slackening in the pressure of work on private architects. The value of new work rose 20 per cent compared with both the third quarter and a year earlier. New work for offices in the London and Middlesex, South Western and North Eastern regions was higher than in either the third quarter of 1960 or the last quarter of 1959. The greater part of the increase in new work since the third quarter of 1960 was for private owners and developers. New commissions for public authorities also increased, but to a lesser degree. All firms, regardless of size benefited from the increase in new commissions. The small firms – those employing between one and five architectural staff – gained the most, principally as a result of a substantial increase in commissions for private housing. New orders placed by private owners and developers in the fourth quarter, were worth 25 per cent more than in the previous quarter, and 15 per cent more than a year earlier. A substantial rise of 60 per cent in new private housing accounted for most of the increase along with a rise in new private industrial building and private offices and banks. There was a fall in the value of commissions for new private commercial and miscellaneous buildings.

Public authority architects' departments put out more new work to private architects in the fourth quarter of 1960 than in either the previous quarter or the corresponding quarter of a year earlier. A good deal of this increase in new work came in new hospital building. New housing for public authorities fell considerably in the fourth quarter.

Taking the work of all firms in the sample, the ratio of projects cancelled or postponed to new commissions received in the fourth quarter, in value terms, was 1 : 10, more than in the previous quarter, when the ratio was 1 : 14. There were about the same number of cancellations as postponements. Financial reasons accounted for one quarter of the value of projects abandoned or postponed, more than in the third quarter; difficulties over the site and in obtaining planning permission were responsible for a further quarter. Other reasons of a varied nature made up the total. The larger firms suffered less from postponements or cancellations than did the small or medium firms.

Regional analysis

Figure 2 and Table 3 show how new work commissioned of private architects was dis-

Table 1 Estimated value of new work for which private architects were appointed

Period	1959 £ million	Change over previous quarter %	Change over same quarter of 1958 %	1960 £ million	Change over previous quarter %	Change over same quarter of 1959 %
First quarter	267	+41	−5	361	+34	+35
Second quarter	222	−17	−2	271	−25	+22
Third quarter	225	+1	+60	276	+2	+23
Fourth quarter	270	+20	+42	329	+19	+22

Table 2 New commissions for private architects analysed by type of building

£ million

Type of building	1959 First quarter	1959 Second quarter	1959 Third quarter	1959 Fourth quarter	1960 First quarter	1960 Second quarter	1960 Third quarter	1960 Fourth quarter
New housing								
For public authorities	17	28	13	13	18	17	33	16
For private owners and developers	77	57	68	74	108	54	67	107
	94	85	81	87	126	71	100	123
Other new buildings								
Private industrial building	46	32	30	55	54	54	36	39
Private offices and banks	21	14	15	31	20	37	24	31
Other commercial and miscellaneous buildings for private clients	63	37	41	38	54	46	57	37
Educational (public and private)	26	34	23	27	56	31	27	44
Other buildings for public authorities	17	20	35	32	51	32	32	55
Total, New commissions	267	222	225	270	361	271	276	329
For public authorities	53	65	61	61	110	72	80	88
For private owners and developers	214	157	164	209	251	199	196	241

Table 3 New commissions for private architects analysed by region, based on the location of the architect's office

£ million

Region	1959 First quarter	1959 Second quarter	1959 Third quarter	1959 Fourth quarter	1960 First quarter	1960 Second quarter	1960 Third quarter	1960 Fourth quarter
London and Middlesex	117	79	102	103	128	114	101	126
Home Counties	32	21	33	26	59	28	40	39
South Western	14	14	11	15	24	11	22	27
Midlands	27	27	22	31	39	41	27	25
North Eastern	24	27	22	30	38	22	35	47
North Western	23	25	23	33	42	19	19	31
Total, England	237	193	213	238	330	235	244	298
Scotland	25	23	7	26	22	28	27	23
Total, Great Britain	267	222	225	270	361	271	276	329

Table 4 Proportion of building work certified by private architects, 1955–60

		1955	1956	1957	1958	1959	1960
Estimated value of building work certified by private architects, excluding work for which only partial service is given	(£m)	335	380	435	350	350	389
Estimated total value of new building work done		1,050	1,200	1,230	1,210	1,250	1,270*
Proportion certified by private architects		32%	32%	36%	29%	28%	31%

* Provisional

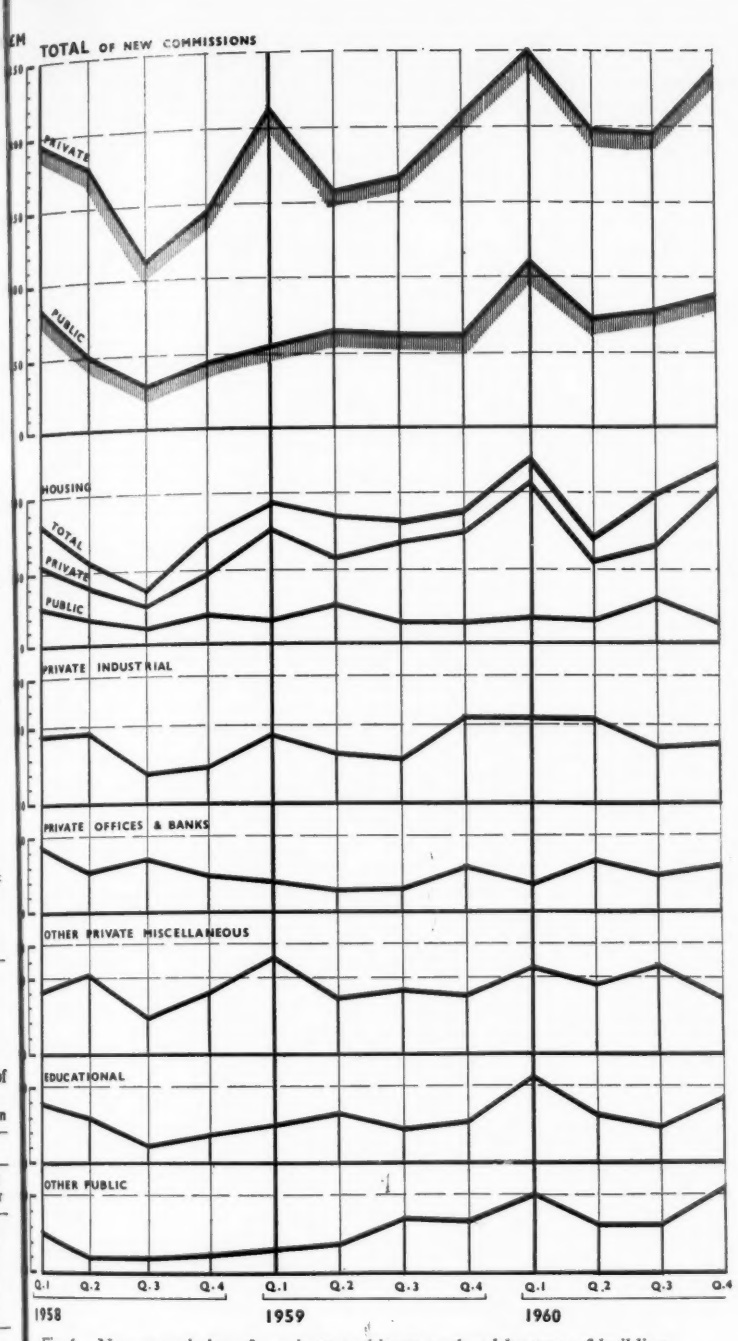


Fig. 1.—New commissions for private architects analysed by type of building

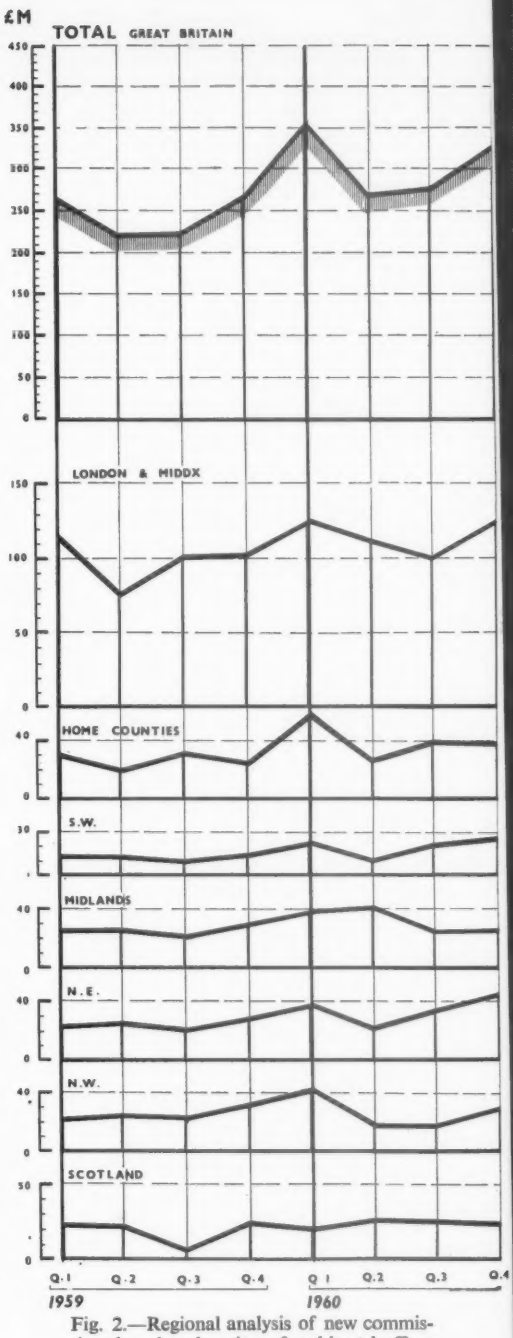


Fig. 2.—Regional analysis of new commissions based on location of architects' offices

tributed according to the regional location of the architect's office.

Offices in London and Middlesex, the South Western, North Eastern and North Western regions had more new work in the fourth quarter of 1960 than in either the previous quarter or (except for the North Western region), a year earlier. Both the Northern regions did particularly well in the fourth quarter. In the Midlands the value of new work was practically the same as in the third quarter and slightly below the last quarter of 1959. New work for offices in the Home Counties in the fourth quarter of 1960 was well above a year earlier and almost the same as in the previous quarter.

In Scotland the value of new work was below the level of both the third quarter of 1960 and the fourth of 1959.

Work certified

Table 4 records the estimated value of work certified by private architects since 1955. In 1960 this showed an increase of 10 per cent over both 1958 and 1959. The whole of the increase came in work certified for private owners and developers.

Comparing the figure of work certified by private architects in 1960 with the provisional figure for the total value of new building work done in Great Britain, it will be seen that in 1960 private architects' share of the total was slightly greater than in 1958 and 1959.

The figures do not take into account the value of work on which the architect has given only a partial service, without being responsible for the supervision and certification of the work. These partial services amount to about one-fifth of the total work handled by private architects, and if taken into account would increase private architects' share of new building work to approximately two-fifths from 1955 to 1957, and in 1960. This proportion was slightly lower in 1958 and 1959.

Research

By Peter Cowan [*A*]

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Introduction

In 1605 Francis Bacon published *The Advancement of Learning*,[1] in which he set out a programme for rationalising the pursuance of knowledge. At the beginning of the second volume of the Montague edition is a chart showing all the branches of learning, their interrelations, and their order of precedence. Later, in the *Novum Organum*,[2] these ideas were codified into a programme for the systematic development and application of science, and this work had a direct bearing upon the founding of the Royal Society in 1660. In 1960 The Advisory Council on Scientific Policy[3] also suggested certain directions for the advancement of knowledge by research. Although separated by 340 years, the two statements have a great deal in common. The need for programmed development of investigation along defined paths, the emphasis on interdisciplinary research and the use of existing knowledge and techniques as a basis for fundamental discoveries, indicate that the organisation of research activities is a recurring problem in any age of scientific expansion.

Research as an activity related to architecture has received considerable attention during the past few years. Such interest is partly born of necessity, for greater knowledge is required as architects are called upon to deal with ever more complex problems. It is also part of a wider concern with science in society and is, to some extent, a consequence of the enormous prestige which science and scientists enjoy today. A recent series of articles edited by Dr Banham and published in the *Architectural Review* under the general title '1960 Series'[4] expressed a general preoccupation with science and society and the relationship of architecture to each of them. The conclusion that science, and by inference research, should be considered as an integral part of architectural activity is beginning to receive general acceptance; an increasing number of publications, policies and pronouncements confirm this.

The report of the Oxford Committee on Architectural Education[5] stressed the importance of research in relation to educational processes, and this was emphasised by Professor Llewelyn Davies in his inaugural address at University College, London.[6] Other individuals have offered statements on the desirability of research as part of architecture as a whole, and have made suggestions for implementing such work. Research units have been set up in the departments of architecture at various universities and others are projected elsewhere. Development units are established within the ministries concerned with building and the work of the Building Research Station now includes direct collaboration with such groups. The building industry recognises the value of research work, and development groups have been set up by some of the larger contracting firms.

The survey of research activities which is now under way[7] will yield most interesting information on the amount and type of research work already being carried out in the architectural field. It is interesting to note that the United States has already gone some way towards formalising research activities for architecture, at least to the extent of holding a conference on the subject. The report of this conference[8] reveals directions for further study and investigation.

In this country most writers have confined themselves to general comments on the desirability of research and have not gone very far towards defining the direction and form which this might take. Moreover, most research or development work is carried out on an *ad hoc* basis, without consideration of the suitability of differing methods, techniques, or organisations to the subject under scrutiny. The results of work carried out are not collated or disseminated in an organised manner, so that much of their value is lost. Finally, the pressures upon research or development work in the various organisations have not been examined, so that the results cannot be judged in correct perspective. It therefore seems appropriate to consider some of these matters and to order our thoughts more thoroughly about what we want to do, and how to go about it.

Terminology

Before discussing detailed aspects concerning research and architecture we should try to clarify some of the confusions and misconceptions which have arisen around the subject. These are generally related to the terminology used and this will be discussed fairly fully as a first step. The Manchester Joint Research Council found the problem of terminology to be fundamental in preparing their report on Science in Industry.[9] In particular they found that extremely diverse views were held about the meaning of the term 'research' and 'development', and in fact the formulation of satisfactory definitions of these terms preceded the preparation of the report. Professor McKie has said, in an address at University College, London,[10] 'We may give any meaning we wish to the words that we use, but subsequent misunderstanding must then be our own responsibility.'

Initially the difference between scientific and non-scientific research must be discussed. The dictionary definition of research is 'Endeavour to discover facts by scientific study, course of critical investigation'.[11] Such a definition falls naturally into two parts. In order to clarify the first part we must decide the meaning of scientific study. As a general statement which is convenient for our purpose we may say that scientific study involves the elements of the experimental method, that is, observation, hypothesis, experimentation, and induction, together with measurement and classification.

Clearly then this part of the definition relates to scientific research as used in the natural sciences. The second part of the definition relates to non-scientific research. It carries no implication of quantitative analysis, but refers to the acquisition of knowledge or understanding of a subject. Historically this type of investigation is at least as old as scientific research, and is used in literary, linguistic, theological and historical work as well as more modern disciplines, such as certain areas of the social sciences. It is important for us to separate the two types of research, and a convenient method would be to use 'research' to describe scientific research, based on scientific method: and 'study' to describe non-scientific research, involving deep consideration of a subject, but not a rigorous testing of hypotheses or quantitative analysis. These classifications will be used in this paper.

The next distinction to be made is between research and development work. This is complicated by the use of the title 'research and development group' to describe organisations which do not in fact undertake research work. Development means the transformation of an idea or thing from a rudimentary or primitive state to a more elaborate one. This implies the prior existence of something which is developed, and it follows, therefore, that while the process of development may (and indeed should) throw up new ideas or improvements, it is not the major purpose of development work to be original or creative, this is a function of research or study.

An implied characteristic of development work is continuity or seriality. Although this is not defined by a dictionary there is, nevertheless, underlying most usages of the term, the idea of 'continuous development'. A full definition of development for our purposes might be; the continuous transformation and refining of ideas into a state in which they may be applied at a practical level. An analogy for architectural development work, and it is the sense in which the term is used by industry, might be product development.

Demonstration should be distinguished from development, particularly in the case of architecture where both types of work are expressed in built form. Demonstration work is similar to development in so far as the application of research ideas is concerned, but a serial or continuous nature is not implied. Demonstration projects can be 'one off'. Demonstration buildings may lead to a series of development projects or they can simply embody ideas which are applied generally but not carried forward from this stage. Because a demonstration project does not imply that ideas need be continued through a long programme, it can be rather more far out than the main stream of ideas within which development work operates. This brings us to a discussion of pure and applied research. 'Just as the difference between one part of the spectrum and another can be recognised, so can the difference between fundamental research, pursued without regard for material advantage, and industrial (applied) research which is undertaken for the economic, social and other advantages to be obtained from it.'[12] However, there is no sharp distinction between pure and applied research, there is really only research with long-term promise of application, and research with short-term promise of application. This is particularly the case in relation to architecture which is intimately bound up with the process of building. The general flow of work must lead towards application. This is not to say that there can be no feedback of ideas from the field to pure research, since this is essential to the vitality of both pure and applied work. However, it would be dangerous to measure the value of an investigation by the immediacy of its application in the field. It has been found in other disciplines that fundamental research, remote from applied work, unexpectedly yields practical results.

Finally, we must distinguish between Operational Research and research at an operational level, since these terms are often used interchangeably. Operational Research refers specifically to a discipline developed during war time and which is concerned with the analysis of operations. In this sense Operational Research includes work study, methods study, time and motion analysis and other related techniques. One of the essential features of Operational Research is the multidisciplinary approach. Professor Blackett, who was concerned with the beginnings of Operational Research during the war, assembled a group which '. . . included three physiologists, two mathematical physicists, one astrophysicist, one army officer, one surveyor, one general physicist, and two mathematicians, "Blackett's Circus", as the group was called, was soon able to demonstrate the value of the mixed team approach to operational problems'.[13] Research at operational level is really concerned with the study of subjects related to direct building application. Such subjects may be studied by means of Operational Research, but this is not necessarily so. It might be said that most architects engage in research at operational level during the process of designing and detailing a building. This is not strictly true, since the previous definition of research as involving the scientific method does not apply; a better description of general architectural activity might be, 'study at operational level'.*

* As a footnote to this section it is interesting to note that the United States Presidential Research Board[14] recognised the need for a strict definition of the various categories and classes of investigation which are often grouped together under the general title of research. The Board therefore made the following definitions. 'There are two . . . divisions, . . . Basic Research, . . . Applied Research . . . Basic Research includes fundamental and background research. Fundamental research is the theoretical analysis, exploration, or experimentation, directed to the extension of knowledge of the general principles governing natural and social phenomena: 'Background research is the systematic observation, collection, organisation, and presentation of facts, using known principles to reach objectives that are clearly defined before the research is undertaken, to provide a foundation for subsequent research, and to provide standard reference data. Applied research is the extension of basic research to the determination of generally accepted principles with a view to specific application, generally involving the devising of a specified novel product, process, technique or device . . . Development . . . The adaptation of research findings to experimental demonstration or clinical purposes, including the experimental production and testing of models, devices, equipment, materials, procedures and processes. Developmental research differs from applied research in that the work is done on products, processes, techniques, or devices that previously have been discovered or invented.'

Subjects for Research

In research as in any other activity the means should be suited to the ends. Freedman[15] says, 'The planning of research should logically be determined by consideration of the nature of the problem. . . .' We shall examine the suitability of different categories of investigation to differing types of subject. Research work itself can best be applied in circumstances where a quantitative result is required. The type of work may vary from high level investigations of a fundamental psychological or physiological nature, via social or statistical survey work, to cost research and materials testing. There are, of course, a great number of subjects which are suitable for this type of investigation, but the important thing to remember is that experimental and quantitative factors must be applied. Jahoda *et al.*, when speaking of research for the social sciences,[16] have said, 'No method known to men can entirely eliminate uncertainty. But scientific method more than any other procedure, can minimise those elements of uncertainty which result from lack of information. By so doing, it reduces the danger of making a wrong choice between alternative courses of action.'

The study method is most suited to historical and philosophical work, communication problems, investigations into professional attitudes, appraisals of building types and the like. The work done for RIBA awards often falls into the category of study as does much of the work in connection with travelling grants. Background investigations made by architects before designing a large or complex building scheme can generally be classed as study. It is a valuable tool, but the limitations of the method must be recognised. The results of study will always remain subject to interpretation. The personality of the study worker will enter into the results and this must be allowed for when assessing the work. The quantitative aspect is not covered, and because of the absence of experimental method, most of the observations are unrepeatable under suitably controlled conditions.

Development work is suited to the progressive application of expanding ideas to a continuous programme of buildings, preferably of a single type. Development may be used to demonstrate planning, design, or constructional features, or all three, but it is essential to be clear at the outset as to exactly what is being developed and why. It is also advisable as in any investigation to limit the number of directions for development in order to retain some control over the experiment, too many variables become impossible to analyse.

A demonstration project is a suitable vehicle for ideas which need testing under field conditions before adoption either generally or into a series of further development projects. Such ideas may concern planning, construction, or detailing, or the project may be used as a demonstration of methods investigated by operational research.

Operational Research may be used to investigate procedures and methods at any stage of the design or construction programme. It can be combined with development or demonstration work, but it is not confined to these, since certain operational research techniques can be used in fundamental work on such things as design or planning methods. Applied research, or research at operational level, may be carried out in demonstration or development projects, or it can be used in general building work.

As will be seen, most techniques for research and study are interdependent, and a particular subject may need the use of one or all of them. The main points to bear in mind when conducting an investigation are: first that the use of each technique must be closely related to a particular subject; second that such subjects must be clearly identified in the general context of the project; and third that the variables

related to each subject under investigation must be known and controllable.

Organisations for Research

We shall consider the differing types of organisation which may be involved in the activities we have been describing, their roles and their limitations, together with the pressures under which each operates.

First, the simplest organisation is the individual who works alone, usually in his spare time, and is not employed or supported by a research organisation. This does not include students, whose work will be dealt with when we consider the place of research in schools and universities. The individual worker has an advantage over other organisations in that he is free from any constraint over the direction of his work. He can put forward original or controversial ideas and accept the blame or praise for himself alone. In addition, because a great deal of personal effort is needed for an individual to accomplish any original work, he may work harder and longer to make it successful than his more organised colleagues. However, the difficulties of individual work must not be minimised. Such difficulties relate to time, money and information. In undertaking research it is essential to be aware of and in contact with all other work which may impinge upon the proposed investigation. This makes the position of the individual worker difficult since without the backing of an organisation he is lacking in resources to pursue such contacts. Therefore a great deal of thought must be given to the background of a subject before beginning any individual work. Such study is a necessary preliminary to any investigation, but will be more difficult and prolonged for the individual worker. Nevertheless, the independent worker should be encouraged, and individual research and study awards, including those of the RIBA, are of great benefit in this way, with the proviso that the selection of subjects is sufficiently rigorous, and that sufficient direction is given in the awards to yield a coherent piece of work.

The building industry, especially in so far as manufacturers are concerned, is becoming more interested in research, and, as mentioned earlier, several large firms have set up development groups. The role of these groups is to improve construction and working methods so as to produce an economic advantage to their company. The advantages of such groups are that the full resources of a building team are available, and that it is easy to test the results of work in the field within the organisation. However, such groups are subject to the disadvantages of most research in industry. These are mainly economic and affect not only the results of research, but also, and more important, the direction in which research is guided. There is a difference in outlook between research workers and industrialists. Although both are concerned with discoveries which will lead to the improvement of a product or process the industrialist is rightly concerned that such improvements should provide in addition the maximum economic advantage. There is therefore a pressure to produce solutions within the framework of organisational policy, and in such a way that they can be applied immediately. Briefly, in industry there must be the earliest maximum pay-off, and the choice of subjects for investigation reflects this.

The 'iceberg' nature of industrial research has been commented upon by Freedman.[17] Because of the need for economic advantage (over competitors) much of the most profitable industrial research work may remain submerged. This does not happen to the same extent in the building industry as in other areas, but nevertheless the basic situation must exist. The main effect of this pressure is in the area of communication and this will be discussed later.

Industry in general makes contributions to fundamental research work via collaboration with government agencies (for example the Building Research Station) and by making grants to universities and foundations. It is seldom that such grants are completely disinterested, but nevertheless they are a valuable addition to the small allocation for such work. If the building industry could make an even greater contribution (for instance, by endowing fellowships via the RIBA) it would be a most enlightened gesture and would do much to raise the prestige of the industry.

Local Authorities, County Councils, Regional Hospital Boards, and the like, are agencies which may well undertake development work. Such local government bodies are particularly suited to this function. They have long-term building programmes, often related to a particular building type; housing, schools, hospitals and the like, which lends itself to the continuous nature of development work. In addition the day to day problems thrown up by other sections of a particular agency can easily be fed back into development. Development work in local government should be related to a national programme, but this must not affect the necessity for investigating local problems. Local government work as a whole is subject to economic and political pressures which may prevent fundamental work being carried out. There is an emphasis on producing quick solutions with a bias towards saving money. This emphasis may be most beneficial at a local level, but it can often prevent more radical solutions being considered, particularly if they are likely to delay the current building programme. The political pressures relate to the framework within which the whole building programme operates. This contains financial, time, and policy factors, the latter concerning the number and type of buildings included in the local agencies programme. Although the local agency may submit its requirements to central government these must be geared to immediate needs and are usually so pressing as to eliminate the possibility of any basic reconsideration of policy. Once the programme has been decided it is difficult for a local agency to question it very deeply.

Within these limitations local authority development work has great possibilities. In addition to a continuous building programme, comprehensive teams are available, which include experts from other specialties, educationists, doctors, administrators, as well as members of the building team. In addition, communication between local government agencies is good and this is essential to development work. The example of CLASP springs immediately to mind. If such co-operation could be extended to other fields even more striking advances might be possible.

In the total amount of research undertaken in the country as a whole Government research is second in volume to that of Industry, and this is also true for research in architecture and building. The majority of such work in Central Government is carried out by the Building Research Station. The Department of Scientific and Industrial Research, of which the Building Research Station is a section, was set up in 1912 in order to carry out research in the national interest for the benefit of the community as a whole, to encourage research and science in industry, and to encourage fundamental research at universities.[18] The work of BRS has been covered elsewhere[19] and it is not worth while considering this again here except in so far as it impinges on the work of other research agencies such as local and central government. In passing mention should be made of the fact that the Building Research Station is only one of a number of other central government research agencies, for example the Medical Research Council, and that in common with these its background and organisation are considerably different to the other research sections of central government. The other agencies of central government that are concerned with architectural investigation work are the ministries concerned with building. These have set up 'development groups', and the work of the Ministry of Education in particular is so well known as to need no further emphasis. However, in view of the programme of public building now under way, a closer look at the work of these groups will be useful.

First, it must be pointed out that the work of the groups is only a small part of the total function of the ministries concerned. Generally speaking, the function of a ministry is to administer Government policy. This must necessarily

limit research or development activities within a ministry. Unlike the Department of Scientific and Industrial Research, which was set up specifically to carry out frontier research, the ministries having parliamentary responsibilities operate a given policy. The degree to which research within a ministry can influence that policy will vary but, generally speaking, such influence can only be exerted in an indirect way. The development groups act as technical advisers to the ministry, and most major policy is controlled in the long run by Parliamentary and Treasury decisions. Because of this, fundamental realignment of policy from within may be very difficult. Often the amount of freedom or restriction on research or development work within a ministry depends on the administrators to whom the group is responsible. Such administrators are in a crucial position and upon their degree of enlightenment depends the success or failure of the groups. It is fortunate that the Senior Civil Service contains administrators of the highest calibre and indeed a case could be made that ministry groups, with their multi-disciplinary approach, should be directed by an administrator rather than a professional or technical adviser.

Within these limitations then, what should be the function of a ministry group? They do not seem to be suitable units to undertake fundamental research or study which might question the basic system within which they operate. Therefore the best fields for them to work in are: demonstration work, and operational and applied research and study. In addition to these two functions the ministry groups have another which is perhaps the most important, that of acting as a 'sorting house of ideas'. This is rather separate from the other work of the ministries and will be dealt with later.

The suitability of ministry groups to demonstration work is a consequence of two main factors. First, the organisation of a series of similar projects as is necessary for development work is difficult, since a ministry group cannot be committed to a large enough building programme to support it. Second, if a ministry concerns itself with a particular line of development it may lose the overall viewpoint so necessary to a central government agency. The ministries are in a position to be aware of all the latest trends in their field and the best way to take advantage of this position would be to demonstrate such ideas to a wider audience. By concentrating on demonstration projects ministry groups can test ideas on a number of definite types of building which might come within their broad programme. Such demonstration projects can be made a result of operational research and can be followed up by multidisciplinary teams from the central government organisation. This follow-up work is essential if the projects are to be of value in a general context.

A suitable role for central government units would be to act as a link between fundamental research and study which is carried out at universities, schools, or in private organisations; and development work carried out at local agency level. However, in order that central government should have some direct connection with development work it should be made possible for ministry personnel to participate, in either an advisory or supervisory capacity, in local agency programmes. This might be difficult to administrate but would, nevertheless, have a two-way benefit. The Ministries would be in a position to act as co-ordinators of information, since they could receive the results of development work on which they advise or supervise; and the local level groups would receive up-to-date advice of the latest developments from the ministry. The Government also supports pure research in all fields through grants in aid to the universities.

One of the difficulties concerning government research relates to publication of results. It is not the policy of government to publish work of individual investigators, particularly if this concerns ideas inimical to official policy. This aspect tends to limit recruitment to the scientific civil service and has been commented upon elsewhere.[20] However, this particular aspect will be covered later when we discuss the communication of research.

Philanthropic organisations, trusts, foundations, and the like, have fundamental roles to play in research. However, as a rule, they work through other organisations rather than undertake direct work themselves. The main exception to this is, of course, the work of the Nuffield Foundation Division for Architectural Studies, the results of which show the possibilities of such organisations when they do undertake direct research. As the recent report of the Nuffield Foundation[21] suggests, the purpose of charitable trusts is to evoke from a community a recognition of the need for particular work which the foundation has pioneered, followed by willingness to meet that need out of communal resources. Because of the disinterested nature of the support offered by such organisations the work undertaken on their behalf can be fundamental in nature and is not necessarily limited by political or policy decisions; in fact it might be said that the major function of trust or foundation research, whether undertaken directly or sponsored at universities, is to ask questions which cannot be asked under other circumstances. In the United States there are more than 600 research foundations, and the Report of the Nuffield Foundation estimates that new trusts are springing up in America at the rate of over 1,000 a year. Such trusts have assets of over two thousand million dollars.[22] At least one-third of this money is given for educational purposes, research into the curriculum of schools, encouragement of the use of new educational techniques and the like.[23] In this country the scale of support has not reached these proportions (the Nuffield Trust report lists only ten trusts); however the amount of work undertaken as a result of aid from research foundations is probably greater than that undertaken directly by the universities.

What are the general conditions under which foundation-sponsored research operates? First of all, as is only natural, research foundations like to back winners. The money they give must be carefully weighed against the value of the proposed work, and its ultimate benefit to the community. This necessity for a stringent appraisal of the proposed work is beneficial to research undertaken as a result, since it means that a great deal of thought must be given to the design of the project before submitting it for a grant. Such a system must eliminate a great deal of woolly thinking about projects in the early stages. There are, however, dangers in the system as has been pointed out by W. H. Whyte, in a recent study of the pressures upon organisations and individuals in various fields.[24] These result from the necessity to sell the project to the trustees or board. This may lead to the tailoring of ideas to acceptable forms which are known to have succeeded before. This aspect is probably not so evident in this country as in the United States, which is the subject of Whyte's study. The second factor relating to foundation-sponsored research is related to time and money. The grants given by foundations are tied to a specified programme of work to be completed in a given time. Because of the exfoliating nature of most research, whereby other avenues of investigation are continually thrown up during the course of the main programme, such time limits are difficult to maintain. The effect of time-table factors prevents the project from becoming diffuse. In addition, if the project runs over the time allocated (this happens regularly) supplementary grants are made always providing a satisfactory progress report can be given. The foundations not only give money for major research projects, they also, in association with industry, endow individual fellowships at universities.

Although there is not much research work being undertaken at the moment in schools of architecture outside the universities, this is obviously going to develop in the years to come and may well form the major area in which fundamental research is undertaken. The remarks that follow will therefore concern university research; however the general comments can just as well concern non-university schools, with some minor differences relating to financial and organisational problems.

The university tradition of research has grown out of the function of teaching. The general problems of this relationship have been receiving particular attention in the press.[25] Dr Bennett, in a recent broadcast, 'Research: the Tyrant',[26] sets out the position very clearly. The problem is to decide upon the proportion of research to teaching work undertaken by university lecturers. The difficulties are accentuated by the pressing need for more graduates, and the consequent pressure on teaching staff and facilities. The situation is complex, since the reputation of most university faculties is based upon the quality of research they produce rather than their teaching commitments. This is not the case in architecture where the reputation of the schools is based almost entirely upon their teaching commitments. However, in schools of architecture the problem of greater pressure for teaching does not seem so pressing; in fact the previously mentioned report of the Oxford Committee on Architectural Education predicts a slackening of the load in the future. This creates a favourable situation for research, and we should now consider the factors under which such commitments would operate. Freedman, writing about research in general,[27] comments that the universities must surely be the happiest place for a research worker. Why should this be? A characteristic of university work is freedom to question ideas. Such freedom is invaluable to fundamental research which might challenge established political, economic, social, or professional patterns. The universities are becoming influenced by Government and Industry, *vide* Professor Bernal[28]; this tendency being particularly pronounced in the United States as indicated in the previously mentioned study by Whyte.[29] Such influence may be a result of financing university research programmes by outside agencies. It is to be hoped that the great majority of university research will be free of such pressures. Another characteristic of the academic world lies in the field of publishing work in progress and of results, the volume of work published from universities exceeding that of any other research organisation. Indeed in the United States it is necessary to publish in considerable quantity to obtain promotion in a university. This is true to a limited extent in this country and has its dangers, the principal one being that the pressure to publish may lead the research worker to produce a large quantity of mediocre papers. However, the formulation of new thought depends upon the interchange of ideas; the university is under an obligation to encourage this and therefore to encourage communication. The universities afford opportunities for contacts between workers in differing fields. Such contacts are always stimulating and often fruitful, the interaction of differing disciplines may set off a new science, *vide* Cybernetics,[30] or it may more modestly open up areas of investigation at a detailed level. The university worker is particularly well placed to survey current work in his own or related fields. If he is working on a long-term study he is able to call on the resources of many other disciplines. These are the reasons why many scientists in this country accept the lower financial rewards of university work.

We should consider the significance of these general ideas in relation to the particular problems of architectural research. The advantages of freedom to ask awkward questions lead to the obvious conclusion that the universities are particularly able to undertake fundamental research and study. Concern with fundamental investigation does not mean that the universities are basically unsuited to demonstration work, but the means are generally limited, except in certain special circumstances, of which the housing research work at Edinburgh University under Professor Robert Matthew is an example. However, any building work undertaken for university research should, because of the special opportunities for basic research, be carefully considered so as to embody fundamental investigations. The opportunities at the universities for abstract or laboratory work are obvious. It is fairly clear that the universities are not usually in a position to undertake development work and this would in any case be inimical to the university attitude. Therefore we can say that the university is suited to carry out fundamental investigations which cannot be studied elsewhere. They can under certain circumstances carry out demonstration projects which embody the results of these fundamental investigations, but the large-scale application of such principles either in a development programme or in the whole field of architecture is not the function of a university, and should be left to others.

So far in our discussion of research in schools and universities we have considered only the role of established research groups. What of the students? Can they be given a role to play? Is it possible to train them in research? When can they make the maximum contribution to the organisation?

First, it is quite clear that students do not at present undertake research in the strict sense when they prepare for a design subject. The question of whether research can be taught has been discussed elsewhere. The general conclusion seems to be that it is possible to teach certain techniques of research, and also to impart an attitude of mind which can be used in investigation; but the application of such techniques and attitudes to a specific problem is the only real way of learning research. Therefore the techniques of research for architecture could be taught during undergraduate education, but application must wait till later. It does not seem possible for students to undertake valid research at a very early stage in their career. At what stage then should students be encouraged to begin research? The validity of immediate postgraduate research depends largely upon the selection of the problem. Students must often lack the necessary experience to assess the feasibility of a subject for investigation and of the best way to go about it. Perhaps the most satisfactory method for training in research would be for students with an interest in research to join the research teams which operate within the schools and universities, in order to gain direct experience of research work. A period of work outside research should follow, to assess the problems facing the profession as a whole and to decide on the field of study which most interests the particular individual, after which it should be possible to return to research and make a really useful contribution. This presupposes that the place of research in architecture will be ensured as a legitimate entity and not as an adjunct to practice. Such a pattern would avoid the dangers inherent in a system whereby the students continue directly from undergraduate to postgraduate work without a period in practice. There is a danger that without this, postgraduate work may become sterile, lacking the stimulus of contact with the world of affairs. Stewart Macaulay, who is Vice-President of Johns Hopkins University, Baltimore, has described the relationship that might exist between the universities and the world of affairs – the market place. He says, 'The academic of whatever stripe, if he be so inclined, has the possibility of contributing something to the solution of real problems, and the people who have to contend with real problems are realising more and more the resources which lie behind those formerly impregnable walls.'[31] This feedback situation is essential to the life of the universities, and is becoming more and more essential to the world at large.

Finally, it needs to be said here that if the work of research groups is not co-ordinated with and fed back into the main curriculum, a good deal of value will be lost.

The place of the RIBA in the research situation is two-fold, as a patron and as a communication agency. The latter function will be discussed when we deal with communication of research. As a patron the RIBA already promotes research by use of its awards system. However, this function could well be extended if the RIBA were to administer and negotiate grants from other agencies and organisations interested in research for architecture. The American Institute of Architects has developed work along these lines. Walter Taylor, the Director of the Department of Education and Research of the AIA, has described the setting up of a research project costing some three hundred thousand dollars in collaboration with the American Hospital Association. The project was sponsored by the US Public Health Service. The AIA selected

a leader for the project, which is jointly administered by AIA and AHA. Other projects, relating to the planning of rehabilitation centres and mental hospitals, have been set up and are administered by the AIA. This is a function which the RIBA could undertake by an extension of its existing organisation.

It is obviously not the function of the RIBA to concern itself with research on its own account except in so far as it already carries out investigations on professional matters. Such work is invaluable and should be continued and expanded, but further than this it is neither practical nor desirable for the Institute to go. A professional organisation is not suited to carry out building projects directly, although it may sponsor or direct them, neither is it suited to carry out fundamental work of a research or study nature, although it may act as sponsor for such investigations.

The following chart shows the proportion of total research and development work in this country carried out by different organisations. The figures and percentages are taken from the Report of the Advisory Council on Scientific Policy 1960. From the same source we know that the building and construction industries spent £1·3 million, while from the Civil Estimates we find that BRS spent about £0·5 million during 1958–59.

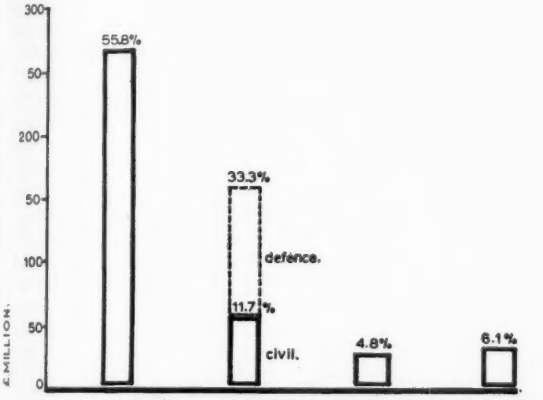

CHART SHOWING PROPORTION OF RESEARCH AND DEVELOPMENT BY EXPENDITURE AND PERCENTAGE ON PRINCIPAL SECTORS 1958-59

Areas for research

Now let us consider into which areas investigation might be directed. The particular problems of architecture may be said to concern people, processes and things. A broad outline of research fields should set out the lines of approach to these factors, the relationships between them, and the disciplines which might be used to investigate each one.

Processes can be regarded as a link between People and Things. Because of this linking factor the area of processes may be divided into those which concern People and those which concern Things. The next step is to consider the areas concerning People and Things, each of which can once again be divided into two. The study of People can be divided into those aspects which treat of the individual human being and his relations with the world, and which may be considered in terms of the biological sciences; and those aspects which deal with the human being as a member of a group, and which are mainly the province of the social sciences. Such a scheme was adopted by Francis Bacon in *The Advancement of Learning* and by Richard Llewelyn Davies in a recent paper on the Human Sciences.[32] The area concerning things is more difficult to categorise, but may be divided into those aspects which concern the physical and material properties of Things, and those which concern things as formal events irrespective of their material properties. The links between People and Things, in the area of processes are made by two disciplines. The Processes related to People may be studied by human engineering while those related to Things are dealt with by production engineering. These two are linked by the general techniques of Operational Research.

It is almost impossible to define exactly the specific disciplines and techniques which may be used to investigate each area. It has been found repeatedly that such disciplines are not restricted to the study of one activity, but may simply be of rather more direct use in certain areas. However, it is probable that the most useful work will relate to the areas between each major area of investigation; and that the most fruitful results may be obtained by the interaction of traditionally separate functions. To quote the Advisory Council on Scientific Policy, 'It has become increasingly clear that the growing points in science are found most frequently in areas lying between the traditional disciplines and involve the participation of several of them.'[33]

I should like to make some general suggestions for the type of problem which might be investigated under each area and the specific disciplines which might be used. The various techniques of the social sciences may be used in studies of the effect of the built environment upon human groups. The biological sciences are appropriate to study of the individual and his environment, and this may lead to the use of techniques in human engineering and psycho-physics in the design process. Production engineering, and particularly the disciplines surrounding systems analysis, are appropriate to studies of the constructional process. The development of new materials, components, and structures may be aided by the physical sciences and by mechanical and structural engineering. Finally the disciplines of aesthetics and art history concern the study of styles and movements. These suggestions are obviously not intended as a comprehensive list of all that is necessary for the study of architecture, but are merely intended to show the type of work which might be accomplished. Each problem while suitable to certain areas of study may involve techniques from other areas, or may indeed be moved over into one of the other areas in the light of further investigation; the interaction and dynamic nature of research activity cannot be emphasised too strongly. Finally, the circular nature of such a pattern of inquiry must be remembered, the study of things and their historical development leads directly to the study of the societies and people that produced them; the connecting disciplines being the history of technology and social history. The process is continuous, investigation leading to studies in related fields, and like *Finnegans Wake*, research activity is a book of Doublends Jined.

The Communication of Research

Professor Bernal, writing of science in history,[34] says, 'The enormously wider front of scientific advance requires a far better system of communication than any private ventures can possibly provide. The situation has indeed been reached in many fields where, owing to this chaos in publication, it is easier to find out a new fact or build up a new theory than to find out whether these have been deduced before'. The problems of scientific communication in general have been discussed by Charles Morris,[35] Colin Cherry[36] and others, but the sheer volume of current research activity defeats most attempts at collation. A rough guide to the magnitude of the problem can be given by a brief examination of the number of scientific periodicals which appear at different times. In 1665 there were two scientific journals published, the *Journal des Scavans* in Paris, and the *Philosophical Transactions* of the Royal Society, in London. At the end of the 18th century, about 150 years later, there were 75 periodicals. By consulting the World List of Scientific Periodicals the current situation can be examined. The first edition of the World List (1921) gives 25,000 titles, in the second edition (1933) 36,000 titles and the third edition (1950) over 50,000 titles. Allowing for the six war years, this gives on average a yearly increase of 1,300 journals.

Kastens, speaking at a conference on scientific documentation, says, 'Anyone who has performed research development

work . . . knows that there is a problem in locating technical information. . . . Total research activities in the United States seem to be expanding regularly about 10 per cent per year . . . the output of written scientific and technical information is increasing at about the same rate. The primary significance of this observation lies in that the growth rate is exponential. The problem will be twice as difficult in 1968 as it is today (1958).'[37] Such are the problems of research and development work in other fields. Since research in architecture is, as yet, in its early stages it is both necessary and possible to consider ways for establishing formal channels of communication which will avoid such later confusion. We should consider the existing organisation of information services. These can be divided into three main classes: governmental, industrial and professional. Of course these classifications are interrelated and often complementary, and are also connected on an unofficial level by individual contacts, but for the purposes of present discussion it will be convenient to consider them first as separate entities and then to discuss formal methods of linkages and expansion.

First, the governmental organisations for research are vital elements in the communication set-up. Leaving aside for the moment the work of the Building Research Station, the ministry groups occupy a unique position which should enable them to be aware of most of the progress in their particular fields. Placed as they are between the universities, industry, and local government agencies, ministries can act as exchanges or sorting houses of ideas. This process may be promoted by an exchange of personnel between central and local government and between central government and the universities. Such a course is indeed advocated in the Report of the Acton Society Trust 'Creative Leadership in a State Service'.[38] Ideally the ministry groups should act as the information centres for the aspects with which they deal. This is possible within the limits mentioned previously, but such limits dictate the nature and extent of the information which can be issued by governmental agencies. In other words, whatever information ministry groups might receive (or indeed whatever they might discover in the course of their own activities) the information that they can publicise must not affect the basic economic or political policy to which they are committed. However, this does not prevent the special commitment of ministry groups in the communication area from being perhaps their most important function.

The Building Research Station operates with considerably less of the pressures of ministry groups and its findings do not necessarily have to fit into a policy framework. Nevertheless, on occasion such pressures seem to be evident from the direction of industry, which takes a considerable interest in the work of the Building Research Station. The BRS is well aware of the problems related to the dissemination of information, and this occupies a section in its latest report.[39]

It is natural to expect the minimum of information about research in industry. The purpose of industrial research is to give the company sponsoring research an economic advantage over competitors, and this is obviously incompatible with the communication of ideas which would be useful to others.

Since there is only one really powerful professional organisation connected with architecture it follows that we should examine the RIBA in relation to its function as a communication medium for research and development work. It seems that of all organisations the RIBA is in the best position to act as a communication element. The technical information service already in existence would be an obvious vehicle for the collection and collation of research information from all fields. This might entail considerable expansion of the service as it exists. Such expa[illegible]could only be undertaken with the assistance, both te[illegible]ical and financial, of the groups participating. Grants from government, industry, and other research organisations would be necessary, together with agreement to supply the RIBA with up-to-date information on research and development work.

What should be the detailed function of an RIBA research bureau and how might it be operated? First, an agreement should be reached with participating organisations as to the precise method whereby active research information could be passed on to the RIBA. Second, an organisation must be set up within the RIBA to process such information. Third, a method must be designed for disseminating information collected. The first two moves will not be dealt with here since they concern policy decisions on the part of participating organisations.

The third factor, however, is well worth a more detailed examination. The most useful method for communicating the type of information we are discussing is by means of the printed page; there are other methods which will be discussed later, but because of the need for a permanent record of research the documentation aspect must be paramount. Once we accept this it remains to discuss the best way of documentation.

The existing facilities of the RIBA should, with some expansion, be quite capable of carrying the load imposed by participating in the communication of research information. The RIBA JOURNAL could well take over the function of publishing work in progress, or preliminary communications on the lines of the *British Medical Journal* (also the organ of a learned Society). At the moment the JOURNAL, as a monthly, could cope with the volume of information needed by slightly enlarging some of its sections, particularly the correspondence areas which could be more formalised and which should be able to accept longer communications of an exploratory nature. However, if the volume of information increased substantially it might be worth while considering a weekly RIBA JOURNAL. The position then would be analogous to the medical world, with the RIBA JOURNAL equivalent to the *British Medical Journal*, and other publications taking the role of the *Lancet*, as unofficial organs of the profession. Of course in a weekly it would not be possible to maintain the high standard of workmanship, typography and presentation which characterise the present RIBA JOURNAL, but the advantages of publishing current research information might outweigh this. For more formal communication an extension of the RIBA notes type of service might be considered.

One of the problems, as mentioned earlier, is to know what has been published elsewhere. Reviews of current literature are not generally satisfactory since they are often read as much for the reviewer as the reviewed. Notes of publications received are useful to those acquainted with a particular field but are of limited value generally. The best and most workable scheme seems to be an abstracting service. The recently started Ministry of Health service[40] is a good example of such a system. Because an abstracting service does not commit the publisher to any of the views expressed in the abstracts, and the elimination of a reviewer avoids any other commitment,

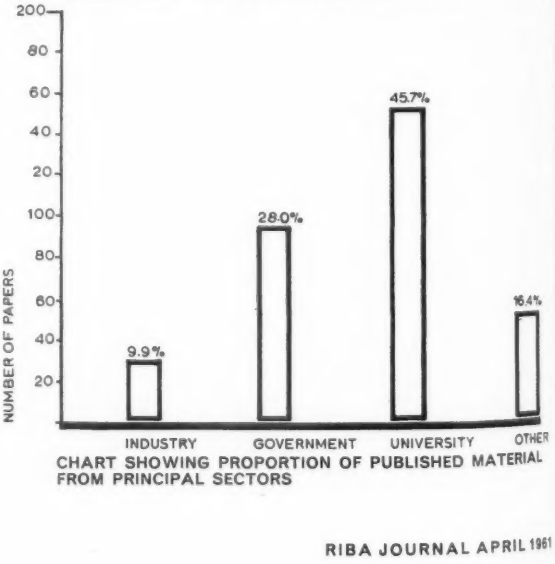

CHART SHOWING PROPORTION OF PUBLISHED MATERIAL FROM PRINCIPAL SECTORS

it seems an excellent method of presenting information. If combined with a translation service with world-wide coverage the value of such a system is increased enormously. An abstracting service of this nature could very well operate within the RIBA technical information service. The experience of other services could be used as a guide when considering such a proposal. The last aspect which the RIBA can pursue in research information would be to co-ordinate publication of its own research projects (i.e. those undertaken as a result of RIBA awards and the like) and to make these available to a wider audience as a routine procedure. This latter task will tie up with the points made earlier regarding the RIBA's place in sponsoring research work. The existing situation as regards publication of research can be gathered from the foregoing chart which shows the results of a survey of some 200 scientific papers and articles emanating from various sources.

This is a crude measure, since the journals relating to differing specific fields might vary in content and in particular the results of much industrial research may be published elsewhere. However, even if the amount of material emanating from industry were trebled it would still remain considerably less than that published from universities.

The place of other means for the communication of research information also needs consideration. An assessment of these is difficult, but accounts of methods used in other disciplines may be used for guidance.

Face to face communication has great value and is, in fact, thought to be the most profitable communication situation. Such communication vehicles as symposia, conferences, study groups, seminars, etc., are all useful for different purposes. A recent report of a conference on conferences[41] has dealt very thoroughly with this type of organisation and it would be redundant to cover the ground again here. The work of Moreno[42] and Lewin[43] has given guide lines to both size and function of groups for differing purposes and goals. The Tavistock Institute of Human Relations has described the processes of study groups at Leicester University.[44] From this work it is clear that very careful thought must be given as to what is required of a particular event. Conferences seem to achieve their maximum effect outside of the plenary sessions, either in study groups or in after-hours activity, where informal social contacts are made. Study courses of a didactic nature must be fairly protracted in order to have a full effect. Seminars should be limited to a very small number, no more than 12 at the very outside. In America some gatherings have been organised with no formal sessions whatsoever and the volume of work accomplished is said to be greater than under normal conference circumstances. Much more information is available on methods of face to face communication, and this can be used with particular advantage in research situations.

Conclusion

Although the productivity index for the manufacturing industries is only six times that of the building and construction industries,[45] the manufacturing industries spend approximately 20 times as much on research and development. Even if we add to the amount spent by the building and construction industries the £0·5 million spent annually by BRS, together with a further £0·75 million for work carried out by ministry groups, universities, and research associations, this still means that only just over £2·5 million is spent annually on research and development in this 'giant among industries'.[46] The situation is graphically illustrated by the following chart (compiled from the Civil Estimates, 1949–61) which shows the total expenditure of DSIR plotted against that of BRS. While DSIR expenditure has increased considerably over the past 12 years, that of BRS has not increased significantly during the same period.

There is therefore an obvious need for more expenditure on research and development for architecture. The initiative for such work, and for pursuing the adoption of the results in the industry must come from the architects and engineers. 'The power of the builder to improve his methods . . . is narrowly limited. But the power of the architect . . . to prescribe an improved practice, or to leave scope for the application of a better technique is considerable.'[47]

In addition we must consider the paths along which research activity should expand. So far nearly all research and development work has concerned itself with physical and mechanistic aspects, and more specifically with constructional methods and materials. This work has reached a reasonable state of sophistication. What has not so far received proper attention is the deeper functional analysis of buildings in relation to human needs. Professor Llewelyn Davies has said, 'With the . . . physical and engineering sciences, we are now in effective contact; with the . . . biological and social sciences, we are still almost completely out of touch.'[48] As physics has moved from Newtonian mechanics towards probabilistic concepts, as medicine moves from rigid concern with the mechanics of the body towards the interplay between mind, personality and bodily function, so architecture must evolve from the limited constructional and engineering problems which have so far occupied attention, towards consideration of the total human needs underlying building.

Finally, why should we wish to expand research activity? Apart from the purely practical considerations of efficiency and professional competence there is a deeper concern underlying the ideas of those who think that science should become a part of architecture. This develops from the idea that both science and architecture are so intimately related to society that for architects to turn their backs on the results of scientific activity is not only folly but positively dangerous. I should like to finish with four quotations which, taken together, form an expression of the problems facing both architecture and society today, and also a means and direction for tackling them.

'. . . for I am convinced that once we become aware of the new needs that a new environment has imposed upon us, as well as the new means of meeting these needs that are at our disposal, it may be a long time yet before our civilization and our human race perish, . . .'[49]

'In the terms of the great challenge which is how to make the whole earth enjoyable by all men, we see this can only be accomplished by design competence, and it is design competence which must be developed in the laboratory by associated research, using our great universities. There, the architect, instead of being accessory after the fact of the great wealth-making of yesterday's era of commerce, joins together with the other architects in taking the economic initiative, joining together with his university, really exploring for the highest capability of man.'[50]

'These new developments in research, teaching, and the communication of knowledge have the same ultimate aim: to give the individual architect more power, and more freedom in design. As our knowledge becomes more complete,

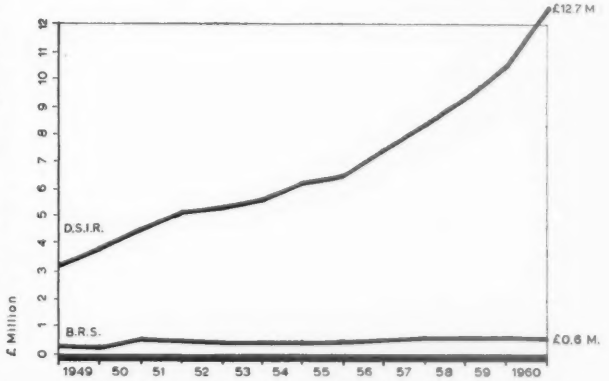

CHART SHOWING TOTAL EXPENDITURE OF DSIR AND THAT OF BRS ANNUALLY OVER 12 YEARS

The exhibition of the work of Michele Sanmichele proved to be one of the most popular held at the RIBA since the war. It closed on 29 March.

better organised, and easier to get at, so it will become more possible for the architect to see his design problems in the round. Then he will be able to draw inspiration from a total view, and not from an isolated aspect only. Our aim should be that each architect's achievement is limited only by his own creative power, and not, as so often today, by an inadequate basis of knowledge.'[51]

'But today bad manners to new ideas, to new suggestions, are sabotage . . . a Public Offence – an offence against the possibility of more good, more housing, more fun, more expansion of the personality. . . . That is to say . . . they are an offence against the possibility of better people. That, pragmatically, is the only immortal sin.'[52]

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Notes and Notices

NOTICES

Special General Meetings, Tuesday 25 April and Tuesday 9 May 1961 at 6 p.m. Notice is hereby given that a Special General Meeting of the Royal Institute of British Architects will be held on Tuesday 25 April 1961 at 6 p.m. for the purpose of considering and, if thought fit, approving the Council's recommendations for the revision of the Bye-laws, resulting from the report of the Constitutional Committee which was published in the JOURNAL for July 1960. The relevant Bye-laws as they exist at present and the proposed amendments are enclosed with this JOURNAL. If the Council's recommendations are approved, a further Special General Meeting will be held on Tuesday 9 May at 6 p.m., prior to the Annual General Meeting on that date, for the purpose of confirming such resolutions as are passed at the Special General Meeting on 25 April.

One Hundred and Twenty-third Annual General Meeting, Tuesday 9 May 1961. The One Hundred and Twenty-third Annual General Meeting will be held on Tuesday 9 May 1961, at the conclusion of the Special General Meeting to be held on that date at 6 p.m., for the following purposes:

Formally to admit new members attending for the first time since their election.

To receive the Annual Report of the Council and Committees for the official year 1960.

(Copies of the Annual Report will be sent to members on 14 April.)

Note: It will facilitate matters if members will give the Secretary prior notice of any questions they may wish to ask.

To nominate two members as Hon. Auditors for the ensuing year.

(Light refreshments will be provided before the meeting.)

RIBA Kalendar 1961–62. Members will remember that last year we asked those members and Students who required a copy of the Kalendar to return the postcard which was enclosed with the JOURNAL. This resulted in a considerable saving on the publication of the Kalendar and the same procedure is being adopted this year. A postcard is enclosed with this JOURNAL and those members who would like to have a copy of the next Kalendar sent to them when it is published in October, are requested to return it completed. Copies will only be sent to those who return the card.

New Building Materials and Preparations. The attention of members is drawn to the fact that information in the records of the Building Research Station, Garston, Watford, Herts., is freely available to any member of the architectural profession, and architects would be well advised, when considering the use of new materials and preparations of which they have had no previous experience, to apply to the Director for any information he can impart regarding their properties and application.

The IUA Congress, 1961. The IUA Congress, 1961, the theme for which will be 'New Techniques and Materials – Their Impact on Architecture' will be held in London from 3–7 July 1961. This will take the place of the British Architects' Conference.

Competitions

Note. An applicant for the conditions of a competition must state his registration number.

Government Office Building and Conference Centre. The Minister of Works invites architects who are resident in the United Kingdom to submit designs in competition for an office and conference building proposed to be erected on a site at Broad Sanctuary, Westminster, SW1.

Assessors: Sir William Holford, PRIBA, PPTPI, Sir Leslie Martin, PHD [*F*] and Mr Eric Bedford, CB, CVO [*A*].

Premiums: £3,000, £1,500, £1,000.

Last day for submitting designs: 12 noon on 2 October 1961.

Last day for questions: 1 May 1961.

Conditions may be obtained on application to the Secretary (AS8L), Ministry of Works, Lambeth Bridge House, London, SE1. Deposit £2.

Housing Development in Hertfordshire. The Watford RDC are to promote an architectural competition for mixed development on a site of 8 acres at Bedmond, Abbots Langley.

Assessor: Mr Clifford Culpin, OBE, MTPI [*F*].

Particulars will be published shortly.

International Competition of Ideas for Church Building. The Danish Ministry of Ecclesiastical Affairs invite architects, sculptors, and painters from the whole world to participate, separately or in groups, in an international competition of ideas with the purpose of exploring the possibilities of working out plans for a Lutheran church in a modern residential quarter.

The programme and other competition material which have been drawn up in accordance with regulations for international competitions in architecture and town planning and for international competitions in painting and sculpture, may be ordered through: The Secretariat of the International Competition of Ideas for Church Building, c/o The Federation of Danish Architects, 66 Bredgade, Copenhagen K, Denmark.

An amount of D.kr. 25 (£1) covering forwarding charges etc. will have to be paid.

Burgh of Motherwell and Wishaw: New Civic Centre. Last day for submitting designs in the first stage: 1 June 1961. Full particulars were published in the JOURNAL for March, page 182.

City of Lincoln: Civic Centre. *The date for submitting designs has been extended to 8 August* 1961. Full particulars were published in the JOURNAL for January, page 102.

City of Westminster: New Housing Scheme. Last day for submitting designs: 10 July 1961. Full particulars were published in the JOURNAL for January, page 102, but in addition it should be noted that *corporate members of overseas societies allied to the RIBA* are also invited to compete.

Royal Welsh National Eisteddfod, Maelor, 1961. Competitions Nos. 181, 182 and 183. All entrants must be Welsh or working or born in Wales. Full particulars were published in the JOURNAL for December, page 62.

Board of Architectural Education

The Artists' General Benevolent Institution Maintenance Scholarship. The Royal Institute of British Architects offer for award in 1961 the following Maintenance Scholarship in Architecture, tenable from 1 October 1961: The Artists' General Benevolent Institution Maintenance Scholarship of a maximum of £125 per annum, available in the first instance for one year and renewable for two further periods of one year each.

(The Artists' General Benevolent Institution Maintenance Scholarship is open to orphans or sons or daughters of an architect or artist.)

The Scholarship is intended to enable a promising student, whose parents or guardians have not the necessary means, to attend an approved course at a School of Architecture recognised for exemption from the RIBA Examinations. A student already taking such a course is also eligible to apply for the Scholarship. The Scholarship is available only for a student who is a British subject by birth or naturalisation.

Applications for the Scholarship (in accordance with the regulations for applications) must be made to the Secretary to the Board of Architectural Education, RIBA, 66 Portland Place, London, W1. The closing date for receipt of applications duly completed is 20 *May* 1961.

Allied Societies

Changes of Officers and Addresses

Devon and Cornwall Society of Architects. Cornwall Branch. Chairman, Mr H. G. Phillips [*A*], 76 Highertown, Truro. Vice-Chairman, Mr T. Henwood Hicks [*A*], 5 Boscawen Street, Truro.

Nottingham, Derby and Lincoln Society of Architects. Secretary, Mr B. R. Dunn, Messrs Chamberlain and Merchant, Park House, Friar Lane, Nottingham.

General Notes

Changes at the Architectural Association. The Council of the Architectural Association have announced that Mr H. J. W. Alexander, who has been on the staff of the Association for 48 years and Secretary since 1937, is retiring in June.

It had previously been announced that Mr Michael Pattrick [*F*], who has been Principal of the AA School for the last ten years, was retiring, and would take up the post of Head of the LCC Central Schools of Arts and Crafts in Southampton Row, in September 1961.

The Council has had under consideration, therefore, not only the appointment of a new Principal but also a new Secretary. It has decided to re-arrange the administration of the Association and the School so as to increase the closeness of the link between them which has always been a feature of this institution.

It has appointed Mr Edward J. Carter, MA, AADIPL. [*A*], to be Director of the Architectural Association, with instructions to control all activities so as to bring the curriculum of the School and the activities of the Association as closely as possible together.

It has promoted Mr George Wiltshire, at present Assistant Secretary, to the post of Secretary of the Association.

It has appointed as Head of the School of Architecture Mr William Alexander Allen, B.Arch.(Manitoba) [*A*], his appointment to take effect on 1 September 1961.

One-day Conference on Joint Education. The Eastern Counties Joint Consultative Board of Architects, Quantity Surveyors and Builders is organising a one-day Conference on Friday, 21 April, at the University Arms Hotel, Cambridge. This is a follow-up to last year's successful Joint Conference on 'Team Work in Building'. This time the subject will be: 'Joint Education – can it contribute to a more efficient Building Industry?'

The main speakers before lunch will be: *Architecture* – Dr Denis Harper [*F*], Professor of Building, Manchester University. *Quantity Surveying* – Mr W. James, FRICS, Member of the National Joint Consultative Committee, and *Building* – Mr D. A. G. Reid, Principal of the Brixton School of Building. Discussion will follow each paper. In the afternoon session, Mr Ian Leslie, Editor of *The Builder* will give an independent assessment of Joint Education, to be followed by discussion. Mr S. E. Bragg, Chairman of the Board, will give the closing speech before tea is taken.

The Conference will be limited to 30 members of each constituent body. Members who wish to attend should write at once to Mr A. M. Lewis, at the RIBA, 66 Portland Place, for a booking form. The fee for the Conference, to be remitted when the booking form is filled in and returned, is 30*s*.

Kingston School of Art. The Department of Architecture, Kingston School of Art, Kingston-upon-Thames invites applications from suitably qualified candidates for admission to the Graduate School for the session 1961–62.

Candidates should be holders of accredited architectural degrees, either of United Kingdom or overseas schools, and should preferably have had at least two years' practical post-graduate experience.

The course for the present will be of one year's duration and will be restricted to eight students. It will be suitable to those (*a*) wishing to follow individual programmes in historical, planning or technical study and/or research, (*b*) wishing to extend their design experience by means of advanced design studies, and (*c*) wishing to study architectural school organisation, teaching methods and curricula.

A certificate will be granted to those satisfactorily completing study programmes.

The fee for the one-year course will be £25. Applications for further particulars and conditions of admission should be made to the Secretary, Department of Architecture, Kingston School of Art, Kingston-upon-Thames, not later than 1 June 1961.

Noise Survey. A noise survey is now being carried out as a combined operation by the LCC and the DSIR. Recordings are being taken of background noise at points in an area of 36 square miles containing a fair sample of the various activities in the County of London. The field work will take from four to six months to complete.

The Building Research Station of the DSIR is providing two vans and apparatus for this part of the survey. LCC staff will be responsible for the positioning and connecting-up of the vans and the working of the apparatus at each of the sites.

Noise measurements will be recorded on magnetic tape at each site for about two minutes in every hour throughout a twenty-four hour period. An automatic timing mechanism in the vans will operate the recording apparatus. The noise recorded on the tapes will later be analysed in the Building Research Station laboratory where each of the two-minute recordings will be replayed. By means of a high speed level recorder and a system of relays designed at the Building Research Station the percentage of the total time of the recording for which the noise falls into any one of 15 five-decibel ranges will be determined. Other detailed examination such as octave and one-third octave analyses will also be made.

In addition to the main survey, the LCC's Scientific Adviser will make detailed surveys of sound levels in selected areas with another vehicle and separate equipment. Special consideration will also be given to the measurement of noise levels at various heights inside and outside tall buildings and to the evaluation of the effect of traffic noise on noise-sensitive buildings, such as hospitals, theatres and churches. The noise encountered is being measured directly with a high-speed-level graphic recorder and also recorded simultaneously on magnetic tape so that a full analysis can be made later in the physics laboratory and the noise level expressed as phons, the phons Unit giving a truer evaluation of noise as perceived by the human ear. From the analysis it will also be possible to obtain the percentage of time for which noise was present at any particular level within a five-decibel range.

The LCC has appointed Mr N. Fleming, lately head of the acoustics section of the National Physical Laboratory, as consultant for the survey.

Conference on the Control of Noise. The problem of controlling noise will be discussed at a three-day conference at the National Physical Laboratory, Teddington, starting on 26 June. While most of the delegates will be from Great Britain, there will be a number from Europe and the United States.

Organised by the NPL, the Building Research Station and the National Engineering Laboratory, of the Department of Scientific and Industrial Research, the three-day programme will cover the following ground:

June 26: General survey of the problems of noise control, fundamentals of hearing and measurement; instrumentation; sources of noise in aerodynamic processes; demonstrations.

June 27: Noise from gears, engines and fans; vibration isolation; ear protection; reduction of jet engine noise; propagation; insulation and absorption; problems in factories.

June 28: Industrial deafness, audiometry and the assessment of damage risk; effects of noise on performance; amenity problems – aircraft, motor vehicles and buildings; noise nuisance and legislation.

Admission is by personal invitation and those interested should write to the Director, National Physical Laboratory, Teddington, Middlesex, for further information.

Ford Foundation English-Speaking Union Travel Grants 1961–62. The English-Speaking Union announces the offer of four travel grants to the United States, these awards having been deferred from last year.

Applications are invited from men and women of British nationality aged between 30 and 50, who are experienced and practising in a branch of the Arts such as Painting, Sculpture, Music, Architecture or Design. Museum curators and art historians are also eligible.

Each grant will cover the cost of travel to and from the United States and travel within that country. There will also be a subsistence allowance for each of the 56 days spent in the United States. The grant may be taken up after mid-September 1961 but must be completed by 1 July 1962.

Application forms and further particulars may be obtained from The Secretary, The English-Speaking Union, 37 Charles Street, London, W1. The closing date for applications is *Monday* 1 *May* 1961.

Architecture of New Stockholm. The exhibition of 'Architecture of New Stockholm' is to be held at the Scottish Building Centre from 13–29 April.

Bound Half-Volumes of the RIBA Journal. Both halves of the bound volumes are now ready: November 1959 – April 1960 and May 1960 – October 1960. Members are reminded that these volumes are only available for those who have regular orders placed.

The prices for the volumes are as follows: paper-bound 11*s.*, postage 2*s.* extra (2*s.* 10*d.* overseas); buckram 16*s.*, postage extra; and binding cases 8*s.* each, postage extra.

The Society of Architectural Historians of Great Britain: Annual Conference. At the Executive Committee meeting held in York on 10 March, it was decided to hold the Annual Conference at Edinburgh, from 15 to 17 September next.

Ministry of Works: Retirement of Chief Inspector of Ancient Monuments. The Ministry of Works announces that Mr P. K. Baillie Reynolds, CBE, TD, MA, FSA, Chief Inspector of Ancient Monuments, is to retire on 30 June. He will be succeeded by Mr A. J. Taylor, MA, FSA, FRHISTS, at present Assistant Chief Inspector of Ancient Monuments at the Ministry.

RIBA Cricket Club. The following matches have been arranged for the coming season: 10 May, *v.* The Vitruvians, at Elstree; 24 May, *v.* The AA, at Elstree; 5 July, *v.* The Blue Circle CC; 26 July, *v.* The RICS, at Cheam; 23 August, *v.* Club Cricket Conference, at Wimbledon, and 6 September, *v.* The LMBA.

The active members of the club now total 23, and the Committee feel that there must be other members of the profession who play cricket and would be willing to turn out for the RIBA XI. Membership of the club is open to probationers, Students, Associates and Fellows of the RIBA. The Hon. Secretary, Mr D. L. Robinson of Ronald Ward and Partners, 29 Chesham Place, London, SW1 would be pleased to hear from any prospective member.

Notes from the Council Minutes

Meeting held on 14 March 1961

Appointment of RIBA Representatives

(*a*) *RICS: Advisory Panel on Research into Problems of Redevelopment.* Mr Colin Buchanan [*A*].

(*b*) *Ministry of Works: Meeting to discuss Stone Masonry, 7 March.* Mr Donald H. McMorran [*F*].

(*c*) *Registered Plumbers Association: Annual Meeting of the General Council, 2 June.* Mr W. A. Allen [*A*].

(*d*) *Standing Joint Conference on the Recruitment and Training of Architects for the Care of Old Buildings.* Mr H. Martin Lidbetter [*F*].

(*e*) *Chester College of Further Education: Building Advisory Committee.* Mr R. Vernon Smith [*F*] (reappointed for a further period of three years from 1 April)

RIBA Award for Distinction in Town Planning. The Council approved the following changes in the regulations for the RIBA Award for Distinction in Town Planning. The new words are printed in italics and those they replace are in square brackets.

1. The RIBA Award for Distinction in Town Planning, which is the only award in town and country planning bestowed by the RIBA, is by conferment only and is limited to Fellows, Associates and Licentiates of the RIBA.

The award recognises outstanding achievement in town planning and civic architecture.

[Outstanding work in the design and layout not only of individual buildings, but of groups of buildings is recognised. The Award is made for actual planning work, and while not primarily intended for housing layouts, such layouts of groups of buildings are not excluded.]

2. Recommendations are submitted to the Council by a Standing Committee set up for the purpose. Personal applications by candidates are not entertained; the name of a candidate must be submitted by three or more sponsors, themselves members of the RIBA, who are required to submit details of the candidate's professional qualifications and experience and evidence *relevant to the nature of his particular contribution* [of the candidates' actual planning work].

Nominations may be made twice annually, on 1 March and 1 November, and must be addressed to the Secretary, RIBA, 66 Portland Place, London, W1.

3. Members upon whom the Award has been conferred are entitled to use the designation 'RIBA Award for Distinction in Town Planning' and it is advised that this should be used in full, or the affix 'RIBA DIST TP' used after the initials 'FRIBA', 'ARIBA' or 'LRIBA' according to class of membership.

Admission to Alliance. *North Lancashire Society of Architects.* At their meeting in May 1960, in approving the proposals of the Constitutional Committee, the Council gave approval in principle to the separation of the Preston, Blackburn and District Society of Architects from the Manchester Society, and to its becoming directly allied to the RIBA under such title as might later be agreed.

In accordance with Bye-law 70, the constitution and rules of the Society had to be submitted and approved by the RIBA Council as a preliminary to admission to alliance.

The constitution and rules of the new Society under the title of The North Lancashire Society of Architects have been prepared in a series of joint consultations between the RIBA secretariat and the Society's Honorary Secretary. The rules being fully in order approval was given to the Society's alliance.

Jamaican Society of Architects. The Jamaican Society of Architects was formed in the summer of 1957. Its membership consists of approximately 35, of whom 24 are corporate members RIBA, three are of architectural qualifications, four are Jamaican trained in Canada or the USA and four are Jamaicans who have been in practice locally.

The rules of the Society have been recently overhauled, in consultation with the RIBA and are fully in order.

There is no other Allied Society in the British West Indies, but the Trinidad and Tobago Society of Architects is in the process of becoming established.

The Jamaican Society of Architects applied for admission as an Allied Society, and the Council have given approval.

Membership. The following members were elected: as Associates 86.

Students: 83 Probationers were elected as Students.

Applications for Reinstatement. The following applications were approved: as Associates: Ernest Harry Adams, Guy Davis, Ronald J. W. Gillings, John Greenfield Grace, Graham Everard Lewis, Robert David Norwood, Douglas Rogers Stark.

Obituary. The Secretary reported with regret the death of the following members: Hamish Edgar Donald Adamson [*F*], Gwilym Bellis [*F*], Walter Hammond Buttrick [*F*], Willie George Farmer [*F*], Leslie Charles Powell [*F*], Vicajee Ardeshir Taraporvala [*F*], James William Hepburn [*Retd F*], Alexander Adam [*Retd A*], Alexander Reynolds Hunter Cranston [*L*], Albert Henry Fennell [*L*], Noel Heppenstall [*L*], George Reginald Oddy [*L*], Harold Gerald Coyne [*Retd L*], Cecil Edwin Fritchley [*Retd L*].

By resolution of the Council the sympathy and condolences of the Royal Institute have been conveyed to their relatives.

Obituaries

Hamish E. D. Adamson [*F*]
died 18 February 1961.

Mr Brian Bagnall writes:

'There is a Malayan proverb: "A loan of gold is easily repaid; the recipient of kindness dies forever in debt". Hamish Adamson who was killed in a motor-car accident on 18 February at the age of 42 leaves behind a multitude of such debtors. He was enormously zestful in everything: in his architecture (with his father Lt.-Col. J. E. Adamson and Andrew Gray); and – when he left the practice in 1957 – as a Management Consultant; in his Territorial Army activities and in his family life.

'Hamish loved cars and at one time proudly acknowledged possession of the noisiest Bugatti in Bloomsbury. Only those who knew him very well were aware of the frequent pain he suffered from a war wound. Indeed, even his co-authors of *Pre-Contract Practice* are probably still unaware of it and remember principally his trenchant, salty and robust criticism allied with constructive thought. He was equally competent handling a banquet or a bulldozer: both would be marked by tireless and happy enthusiasm.

'I recall his intolerance of selfishness, his own vast generosity, his bubbling good humour and immediate response to anyone in need of a helping hand.'

Leslie Charles Powell [*F*]
died on 15 February 1961.

Mr E. S. North [*F*] writes:

'May I pay a tribute to my old friend and colleague Leslie Charles Powell, who died suddenly on Wednesday 15 February at the age of 65.

'I first met L. C. P. in 1927 when, fresh from the AA, I joined the staff of the late Messrs W. A. Forsyth and H. P. G. Maule [*FF*]. He was then, at 32, the same rotund and wise old bird he continued to be.

'Leslie Powell received his early training at the Crystal Palace School of Engineering and did not take the RIBA examinations until he was in his 30s. This accounted, I think, for the careful and "down to earth" consideration he gave to every problem.

'My first experience of working with him was on the survey of the site at Camden Town for the rebuilding of the Royal Veterinary College for which he was largely responsible under H. P. G. Maule.

'During the 1914–18 war he served in the Machine Gun Corps, and received wounds from which he never quite recovered, though he made light of them.

'I joined him in Chesham in 1944 and worked with him on the designs for Local Authority housing schemes and other works in Chesham and elsewhere. Although L. C. P. could, and did, turn his hand to all types of buildings both large and small, his greatest enthusiasm was for housing, particularly where special consideration had to be given to the needs of invalids and old people.

'He devoted most of his time from 1944 onwards to the Douglas Haig Memorial Homes and the Housing Association for Officers' Families. In this connection he was responsible for the design of groups of houses all over the British Isles. His special knowledge of the design of houses for old people is in evidence locally at Chesham in his Fullers Hill Scheme and in the Dawes Homes in Missenden Road, recently completed.

'Leslie and I were partners from 1944–51 and we were joined by Norman Sanders [*A*] in 1948, but Leslie was too much of an individualist to take partnership comfortably. Though the partnership was dissolved we never quarrelled over this or anything else and continued to work together in the same office until the day of his death.'

Correction. In the obituary note on the late Colonel N. H. Waller [*F*] in the March JOURNAL it was stated that he was a Past-President of the Wessex Federal Society of Architects, which was not correct. Colonel Waller did however serve as President of the Gloucestershire AA 1925–27.

Membership Lists

ELECTION: 14 MARCH, 1961

The following candidates for membership were elected on 14 March 1961.

AS ASSOCIATES (86)

Abrahamsohn: Alfred Louis, B.Arch.(Rand), Johannesburg, South Africa.
Ainsworth: William Robert, B.Arch.(Dunelm), Newcastle upon Tyne.
Albon-Crouch: Clifford Eric, Bristol.
Allsopp: Robert Nicholas, Dip.Arch.(Leics.), Leicester.
Archer: Lok Cumwar, B.Arch.(Rand), Johannesburg, South Africa.
Armstrong: Patrick Stewart, Dip.Arch.(Birm.), Walsall.
Avery: Graham Richard, Dip.Arch.(RWA), Budleigh Salterton.
Ball: Thomas Malcolm, AADipl., Barnsley.
Beer: Michael John, Dip.Arch.(Dunelm), Whitley Bay.
Bennett: Colin, Dipl.Arch.(Leeds).
Blaikie: Richard Mercer, DA(Dundee), Kirkcaldy.
Boyd: Hugh Dick Falconer, AADipl.
Brookhouse: Ralph James, Dip.Arch.(Leics.).
Brooks: Norman William Tudor, Dip.Arch. (Southend), Canvey Island.
Buist: James Alexander, DA(Edin.), Edinburgh.
Burn: John Urquhart Burton, Purley.
Campbell-Smith: Dudley Longville, Mount Lofty, South Australia.
Carby Hall: (Mrs) Heather Gillian, Dipl.Arch. (Leeds), Leeds.
Cartwright: Thomas James Nelson, MA (Cantab.), Dip.Arch.(Nottm), Nottingham.
Copland: John Alexander, DA(Edin.), Dumfries.
Coupland: Grant James.
Cowasjee: Noshirwan, Dip.Arch.(The Polytechnic).
Cranko: Petrie Herbert, B.Arch.(Rand), Kroonstad, Orange Free State, South Africa.
Crawford: Colin Glen, B.Arch.(Rand), Johannesburg, South Africa.
Crockford: Billie Henry, Dipl.Arch.(Northern Polytechnic).
Cummock: John Blair, DA(Glas.), Glasgow.
Curry: William James, Dip.Arch.(Sheffield), Belfast.
Dale: John Russell, Dip.Arch.(Birm.), Leek.
Davidovitz: Joseph, B.Arch.(Rand), Johannesburg, South Africa.
Deaney: Henry Cooke, Dip.Arch.(Sheffield), Belfast.
Dockray: Brian, York.
Ferguson: Malcolm, Dip.Arch.(The Polytechnic).
Fox: Christopher Carr, Dip.Arch.(Nottm), Chilwell.
Gale: Donald Alastair, Dipl.Arch.(Leeds).
Garside: John Kirkland, Dip.Arch.(Birm.), Coventry.
Gordon: Adam Lindsay, BA, Dipl.Arch. (Cantab.), Kelvedon.
Greenway: John Richard, Dip.Arch.(Birm.), Birmingham.
Gregson: Anthony Ian, Dipl.Arch.(UCL), Bromley.
Gregson: (Mrs) Jennifer Madeleine, Dipl.Arch. (UCL), Bromley.
Hampden: Christopher John, Dipl.Arch. (Kingston), Milford.
Hannon: Michael Edward, Dip.Arch.(Birm.), Belfast.
Hatton: Roderick Edward Norman, Dip.Arch. (Leics.), Richmond, Surrey.
Hinton: David John, APTC(Arch.), Thornbury, Victoria, Australia.
Hodgson: Jeremy David Wallworth, Dundee.
Howard: Michael Warwick, Dip.Arch.(Leics.), Bourne.
Howell: George Maxwell, Brisbane, Queensland, Australia.
Hurn: Gordon Charles, Dip.Arch.(Leics.), Norwich.
Jacobs: Harris B., B.Arch.(Rand), Johannesburg, South Africa.
Jay: Gerard Anthony Carew, Dipl.Arch. (Oxford).
Jinadu: Gabisiyu Bolaji, Dip.Arch.(Birm.), Birmingham.
Jones: Trevor Lewis, Morden.
Kirby: Douglas Conyers, Dipl.Arch.(Oxford), Southampton.
Kirk: Robin Mansfield, Dip.Arch.(Auck. NZ).
Konig: (Miss) Anneliese, B.Arch.(Rand), Johannesburg, South Africa.
Lansley: Clifford Gordon, Dip.Arch.(The Polytechnic).
Lumley: Colin Arthur, Dip.Arch.(The Polytechnic).
Makower: Peter, MA(Cantab.).
Moorey: Edward Alan, Dipl.Arch.(Leeds), York.
Moss: Stanley Felix, B.Arch.(Rand), Johannesburg, South Africa.
Parkin: John Cradock, Dip.Arch.(CT), East London, South Africa.
Paterson: Robert Wallace, Dip.Arch.(The Polytechnic).
Pite: William Bidlake Winterton, Dip.Arch. (The Polytechnic), Haslemere.
Ritchie: Gordon Stewart, DA(Dundee), Coventry.
Roberts: Charles Brian, Dip.Arch.(Sheffield), Manchester.
Robson: (Miss) Pamela Forster, Leeds.
Rushton: Terence, Dip.Arch.(Leics.), Leicester.
Scott-Mitchell: Alastair Harold Pickering, Dipl.Arch.(UCL).
Shapiro: Hymie Phillip, Dip.Arch.(CT), Johannesburg, South Africa.
Sharma: Madan Mohan.
Shorrock: Clifford Gordon, Dip.Arch.(Sheffield).
Sinclair: Robin Alexander Kerr, Dip.Arch. (CT), Cape Town, South Africa.
Slaski: Zbigniew Piotr.
Smith: Ian, DA(Edin.), Dumfries.
Smith: John Victor, Leeds.
Smith: Newman, Dip.Arch.(Dunelm), Sunderland.
Staples: Anthony Aidan Charles, Dip.Arch. (RWA), Bristol.
Stone: Charles Eric, Dip.Arch.(Sheffield), Sheffield.
Talbot: Michael James, Norwich.
Taylor: Stuart John, Dip.Arch.(Birm.).
Thexton: John Whittam, Dip.Arch.(Dunelm), Newcastle upon Tyne.
Tollman: Edwin, B.Arch.(Natal), Dip.TP (Lond.), Durban, South Africa.
Walker: Peter John, Dip.Arch.(Birm.), Sutton.
Walmsley: John Leslie, Dipl.Arch.(Leeds), Bradford.
Waterhouse: John Michael, Dipl.Arch.(Leeds), Leeds.
Wood: Ramon Keith, Birmingham.
Young: David, Dip.Arch.(The Polytechnic).

ELECTION: 9 MAY 1961

An election of candidates for membership will take place on 9 May 1961. The names and addresses of the candidates found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, RIBA, not later than Monday 17 April 1961.

The names following the applicant's address are those of his proposers.

AS HONORARY CORRESPONDING MEMBERS (3)

Abrossimov: Pavel Vassilyevich, Secretary General of the USSR Union of Architects; Member of the USSR Academy of Sciences, Novoslobodskaya ul. 54/56, ap. 99, Moscow A55, USSR. Proposed by the Council.

May: Professor Dr., Gr. Flottbek, An der Flottbek 15, Hamburg, Germany. Proposed by the Council.

Tschumi: Jean, Professeur à l'Ecole Polytechnique de l'Université de Lausanne, 16 Avenue Tissot, Lausanne, Switzerland. Proposed by the Council.

AS ASSOCIATES (55)

Baxter: Royce Woolloton, 'Kestrels', Burwash, Sussex. John Ware, Michael Pattrick, J. W. Wilcox.

Bowry: Francis James, DArch.(Kingston), 22 Bazalgette Gardens, New Malden, Surrey. Applying for nomination by the Council under Bye-law 3(*d*).

Campbell: James Stewart, DA(Dundee), 'Ingliside', Carberry Road, Leven, Fife. Chessor Matthew, A. F. S. Wright, W. S. Gauldie.

Cantwell: John Keith, AADipl., 32 Woodville Gardens, Ealing, W5. Philip Powell, Hidalgo Moya, Arthur Korn.

Chatterjee: Himadri Prosad, BA(Arch.) (Sheffield), 22 Birkendale View, Sheffield 6. E. Maxwell Fry, J. Lewis Womersley, Prof. John Needham.

Collings: Michael Roseveare, MA, Dip. Arch.(Cantab.), 'Oaklea', Eltisley, Huntingdon. David Roberts, Prof. Sir Leslie Martin, W. Parker Dyson.

Cornell: (Miss) Rosemary Ann, Dip.Arch. (Southend), 55 High Cliff Drive, Leigh on Sea, Essex. J. M. Scott, P. F. Burridge, F. R. S. Yorke.

Critchlow: (Mrs) Margaret Jenifer, Dip. Arch.(Sheffield), 8 Horbury Crescent, W11. Prof. John Needham, Prof. Stephen Welsh, H. B. Leighton.

Critchlow: Rex Stafford, Dip.Arch.(Sheffield), 8 Horbury Crescent, W11. Prof. John Needham, Prof. Stephen Welsh, J. Fred Pye.

Davenall: William Wesson, Dip.Arch. (Birm.), 45 Paignton Road, Birmingham 16. A. Douglas Jones, Edwin Watson, F. W. B. Charles.

Donaldson: Ian Travis, AADipl., 48 Belsize Avenue, NW3. Arthur Korn, J. W. Wilcox, M. Pattrick.

Edwards: Norman John, B.Arch.(Sydney), M.Arch.(Mass. Inst. Tech.), 29 Kensington Gardens Square, WC1. Denys L. Lasdun, M. Pattrick, Arthur Korn.

Farrow: Brian Verrall, Dip.Arch.(The Polytechnic), 'Pinewood', Willow Grove, Chislehurst, Kent. Elidir L. W. Davies, Alan H. Devereux and applying for nomination by the Council under Bye-law 3(*d*).

Fisher: James Robert Brooks, Dip.Arch. (RWA), The Homestead, South Wonston, near Winchester, Hants. R. A. Le Fevre, G. J. Cuzens, T. W. Snailum.

Fisher: Peter Wells, Dip.Arch.(Manchester), Woodbury, Whitmore, near Newcastle, Staffs. Prof. R. A. Cordingley, C. Knapper, Donald C. Campbell.

Foster: John Martin, Dip.Arch.(Sheffield), 41 Dore Road, Dore, Sheffield. Prof. Stephen Welsh, Prof. John Needham, J. Lewis Womersley.

Gibson: Thomas Stephen Davidson, Dip. Arch.(Abdn), 46 Forest Road, Aberdeen, Scotland. E. F. Davies, D. J. A. Ross, John MacLennan.

Gradon: Martin Thompson Moffat, Dip. Arch.(RWA), Cyrtelhide, Dittisham, Dartmouth, South Devon. T. H. B. Burrough, R. W. H. Vallis, Frank Risdon.

Greenall: Alan, BA(Arch.)(Manchester), 22 Heworth Burn Crescent, Felling on Tyne, Gateshead, Co. Durham. Prof. R. A. Cordingley, Eric S. Benson and applying for nomination by the Council under Bye-law 3(*d*).

Griayer: Dennis Thorneycroft, 22 Marlowe Road, Worthing, Sussex. K. E. Black, W. J. Thrasher, Stanley H. J. Roth.

Hadden: Anthony Laurence, 29 Pollard Street, Kettering, Northants. Robert Howrie, A. N. Harris, Peter Dunham.

Heddle: George Malcolm, Dip.Arch.(Abdn), 103 Hamilton Place, Aberdeen. E. F. Davies, John Maclennan, G. Angus Mitchell.

Heksel: Jan Ryzowski, 'Warley', 89 Farncombe Street, Godalming, Surrey. Robert Cawkwell, J. W. Davidson, T. Smith Shearer.

Highfield: Michael Henry, Dip.Arch. (Nottm), Fox Elms House, Tuffley, Gloucester. Norman Summers and the President and Honorary Secretary of the Wessex Federal Society of Architects, under Bye-law 3(*a*).

Howrie: Anthony James, BA(Arch.)(Sheffield), 219 High Road, Buckhurst Hill, Essex. John Needham, Robert Howrie, F. A. C. Maunder.

Jenkins: Ceri Rees, B.Arch.(Wales), 149 The Barley Lea, Stoke Aldermoor, Coventry. Lewis John, C. F. Jones, Arthur Ling.

Jones: Herbert Martyn, Dip.Arch.(Wales), 'Glanant', Surgery Road, Blaina, Mon., South Wales. Frankland Dark, Thomas A. Eaton, Lewis John.

Jozefowicz Wilde: Stefan T., 11 Gainsborough Road, Chiswick, W4. Z. Sirotkin, R. Taunton Boutall, E. H. Banks.

Leach: Christopher William, Dipl.Arch. (Leeds), 97 Askham Lane, Acomb, York. F. Chippindale, Andrew Renton and applying for nomination by the Council under Bye-law 3(*d*).

Lewis: David Gareth, Dip.Arch.(Cardiff), 'Fairwood', 11 Daphne Road, Penywern, Neath, Glam. Lewis John, Chessor Matthew, C. G. Tagholm.

Lindsay: Alan Johnston, DA(Dundee), 21 Barnes Avenue, Dundee, Angus. Chessor Matthew, W. S. Gauldie, A. F. S. Wright.

Low: Alan Malcolm, Dipl.Arch.(Oxford), 'Overstone', The Green, Freeland, Oxon. David Booth, Miss Judith G. Ledeboer, Reginald Cave.

McDonald: Hector, Dip.Arch.(Abdn), 9 East Park, Harlow, Essex. E. F. Davies, John Maclennan, D. J. A. Ross.

McFadzean: Kenneth Douglas, B.Sc.(Arch.) (Glasgow), 75 Milverton Road, Whitecraigs, Renfrewshire. Applying for nomination by the Council under Bye-law 3(*d*).

Mackay-Lewis: Jeremy James, B.Arch. (L'pool), 29 Gloucester Square, W2. Applying for nomination by the Council under Bye-law 3(*d*).

Madeley: Victor Edward, Dip.Arch.(Sheffield), 96 Scabridge Road, Newcastle-under-Lyme, Staffs. J. R. Piggott, J. W. Plant, J. A. Pickavance.

Martin: Alexander Crichton, BA(Arch.) (Manchester), 53 Parsonage Road, Heaton Moor, Stockport, Cheshire. Prof. R. A. Cordingley, Eric S. Benson, Haydn W. Smith.

Morrison: Alexander, 29 Meadway Close, Kettering. Robert J. Howrie, A. N. Harris, Walter Rosser.

Ogunbamwo: Folorunso, Dip.Arch.(Manchester), 19 Clyde Road, West Didsbury, Manchester 20. Prof. R. A. Cordingley, Eric S. Benson, J. Price Nunn.

Parker: Frederick Thomas, Dip.Arch. (Birm), 43 Westmorland Road, Wyken, Coventry, Warwickshire. W. F. Johnson, J. Brian Cooper, F. W. B. Charles.

Paterson: James Mason, DA(Glas.), 99 Dundrennan Road, Glasgow S2. Prof. F. Fielden, Prof. William J. Smith, F. R. Wylie.

Pittaway: John Kenneth, Dip.Arch.(Birm), 30 Springfield Road, Blackheath, Birmingham. T. M. Ashford, F. W. B. Charles, Harry Cherrington.

Ramsay: Sydney Greig, Dip.Arch.(Abdn), 6 Castle Terrace, Inverbervie, Montrose, Angus. E. F. Davies, John Maclennan, D. J. A. Ross.

Rowen: (Miss) Eileen, Dip.Arch.(Leics.), 35 High Street, Market Harborough, Leics. John Swarbrick, Robert Howrie, S. Penn Smith.

Smith: Michael Ian Montague, MCD, B.Arch.(L'pool), 65 Addison Road, W14. Prof. R. Gardner-Medwin, Prof. H. Myles Wright and applying for nomination by the Council under Bye-law 3 (*d*).

Storr: Charles Andrew, Dipl.Arch.(Hull), Dip.CD(L'pool), Flat 21, Alexandra Park Flats, Aigburth Road, Liverpool 17. Prof. H. Myles Wright, Harry Banister, J. Konrad.

Taylor: Joseph Eric, B.Arch.(L'pool), 27 Alness Road, Whalley Range, Manchester 16. Prof. R. J. Gardner-Medwin, Dr Ronald Bradbury, R. R. Young.

Thomas: William Clive Benjamin, Dip.Arch. (Wales), 146 Pontardawe Road, Cwmgors GCG, near Ammanford, Carms. Lewis John, C. F. Jones, C. H. Francis.

Tooms: Patrick Telfer, 5 Blackfriars Street, Canterbury, Kent. Applying for nomination by the Council under Bye-law 3(*d*).

Watchorn: Barrie, 24 Harewood Avenue, Highbury Vale, Bulwell, Nottingham. Applying for nomination by the Council under Bye-law 3(*d*).

Watson: John Malcolm, BA(Arch.)(Manchester), 36A Brandlesholme Road, Greenmount, Tottington, near Bury, Lancs. Prof. R. A. Cordingley, Eric S. Benson, Leonard C. Howitt.

Will: Ian Martin, DA(Glas.), 38 Clarion Crescent, Glasgow W3. Prof. F. Fielden and applying for nomination by the Council under Bye-law 3(*d*).

Willis: Alan James, DA(Edin.), 51 Drylaw Crescent, Blackhall, Edinburgh 4. Prof. Robert H. Matthew and applying for nomination by the Council under Bye-law 3(*d*).

Woods: Robert, Dip.Arch.(The Polytechnic), 'Ardcarron', Saintfield Road, Belfast 8. H. Werner Rosenthal, J. S. Forster, John S. Walkden.

ELECTION: JULY, 1961

An election of candidates for membership will take place in July 1961. The names and addresses of the overseas candidates found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, RIBA, not later than Friday 30 June 1961.

The names following the applicant's address are those of his proposers.

AS ASSOCIATES (9)

Chee: Teck Chiang, B.Arch.(Melbourne), 8A Chempaka Avenue, Singapore 13. Prof. Brian B. Lewis, R. G. Parker, Mrs Hilary Lewis.

Dewan: Sushil Kumar, Dip.Arch.(The Polytechnic), Duisburg-Buchholz, Lome Strasse 40, Germany. Peter Goodridge, John S. Walkden, J. S. Foster.

Jakutowicz: Piotr, Dipl.Arch.(Northern Polytechnic), 170 Union Avenue, Salisbury, CI Southern Rhodesia. C. G. Bath, S. F. Burley, J. E. Moore.

Keir: Alan, Dip.Arch.(Abdn), PO Box 3044, Kampala, Uganda. E. F. Davies, Mrs E. D. Hughes, R. W. J. Polkinghorne.

Khirwadkar: Yeshwant Ramrao, Office of Government Architect, Public Works Dept., Madhya Pradesh, TT Nagar (North), Bhopal, India. D. G. Karanjgaokar, J. V. Ghandhe, B. E. Doctor.

Kraehmer: Fritz Phillip, Dip.TP(Rand), 63 Saambou Bldg, Andries Street, Pretoria, South Africa. O. Pryce Lewis, Prof. L. W. Thornton White and applying for nomination by the Council under Bye-law 3(*d*).

Lord: Roger, MA(Cantab.), 45A Campbell Street, BMB 2169, Lagos, Nigeria. J. W. A. Cubitt, W. S. A. Prew and applying for nomination by the Council under Bye-law 3(*d*).

Roberts: Evan Priestley, B.Arch.(Auck. NZ), 5 Seddon Street, Westown, New Plymouth, New Zealand. Prof. C. R. Knight, C. Reginald Ford, W. H. Gummer.

Thye: Ng Ngok, 77 Main Road, Menglembu, Perak, Malaya. Prof. Brian B. Lewis, R. G. Parker, Mrs Hilary Lewis.

Members' Column

This column is reserved for notices of changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

PRACTICES AND PARTNERSHIPS

Mr Victor G. Bartholomew, ARICS, AMTPI [*A*], has resigned his appointment as Deputy Chief Architect/Planner, Basildon Development Corporation, and has entered into partnership with **Mr Jan Farber.** They are practising under the style of **Jan Farber and Bartholomew,** from Nevendon Hall, Basildon, Essex.

Messrs H. Austin Barton and Partners of 40 High Street, Camberley, Surrey, and Station Road, Bracknell, Berks, have taken into partnership **Mr O. D. Willmore** [*A*] who will join the present partners, **Mr H. Austin Barton** [*A*] and **Mr Peter G. Barton** [*A*]. The style and title of the firm will remain unchanged.

Mr Iain Black, BSC. [*A*] and **Mr Fraser A. Young** [*A*], together with **Mr Horace J. D. Hamilton** [*F*] and **Mr Donald Fraser** [*A*] have formed a partnership under the title of **Black and Young Associated Consultants,** 37 Woodside Terrace Lane, Charing Cross, Glasgow, C3 (Douglas 5101), where they will be pleased to receive trade catalogues and samples.

Messrs Burrough and Hannam [*FF*] of Bedford House, 23 Richmond Hill, Bristol 8, have opened a branch office at The Old Court House, Ross-on-Wye, Herefordshire. **Mr John Gabb** [*A*] is the resident associate in charge.

Mr Thomas A. Crawford [*L*] and **Mr J. V. Spencer** [*A*] announce that as from 20 February 1961 their practices have amalgamated. They will practise under the style of **Crawford and Spencer,** from 91 Borough Road, Middlesbrough, Yorks (Middlesbrough 2300 and 3883).

Mr G. Keith Davidson [*A*] has commenced private practice at Imperial Chambers, 62 Dale Street, Liverpool 2, where he will be pleased to receive trade literature.

Mr Thomas R. Duckworth [*A*] has commenced private practice on his own account at 30 St James Street, Accrington, Lancs. (Accrington 32483), where he will be pleased to receive trade catalogues, etc.

Mr John Grace, MA [*A*], formerly on the faculty of the School of Architecture, Tulane University, New Orleans, USA, has joined the firm of **Norman and Dawbarn** [*F/A/L*] and is going to Jamaica as their representative, to open an office in Montego Bay.

The practices of **Inglis, McGuiness and Wilkinson** of Nairobi and Kampala and **Graeme Barker and Wilson** of Nairobi have been amalgamated as from 1 January 1961. The partners, **Mr Alick Inglis** [*F*], **Mr Frederick Wilkinson** [*A*], **Mr Graeme Barker** [*F*] and **Mr George Wilson** [*A*] will continue to practise under the name of **Inglis, Wilkinson, Barker and Wilson** at PO Box 2878, Nairobi, Kenya, PO Box 307, Kampala, Uganda, and 41 The Avenue, St Margaret's, Twickenham, Middlesex. The London office will be pleased to receive trade literature.

Messrs E. H. C. Inskip and Son [*A*] of 29 Goldington Road, Bedford, have recently opened a branch office in 'Old Tan Yard', St Neots, Hunts, under the direction of **Mr D. G. Young** [*A*].

Mr Keith Manners [*A*] has left his employment with **Chamberlain, Powell and Bon** and will be running his own practice under the style of **Keith Manners** from 18 Worthington House, Myddelton Passage, London, EC1 (Terminus 0954), where he will be pleased to receive trade catalogues.

Mr Peter R. N. Meers [*A*] has commenced practice at 1 Lansdown, Stroud, Glos. (Stroud 640), where he will be pleased to receive trade catalogues.

The title of **Nurcombe, Summerley and Associates** has been altered to **Summerley, Duncan, Ringrose and Todd** as far as the Salisbury branch is concerned. The partners remain the same as before, and the title of the Johannesburg branch remains unaltered.

Mr E. J. McAdam Robinson [*L*] (Messrs Fenton and Robinson, 10 Paradise Square, Sheffield 1) has taken into partnership **Mr Peter Elwin Malone,** BA(Arch.)(Sheffield) [*A*] as from 1 April 1961. The style of the firm will be **Messrs Fenton, Robinson and Malone.**

Mr G. B. Smith [*A*] has resigned from the position of Senior Architect, Ministry of Education, Jamaica, and is commencing private practice at Curphey Place, South Avenue, Kingston 5, Jamaica, where he will be pleased to receive trade literature and catalogues.

Mr F. R. Stovin-Bradford [*A*] has commenced practice on his own account at the Red House, Market Square, Amersham, Bucks. (Amersham 2509).

CHANGES OF ADDRESS

Mr John W. Ball [*L*] has changed his address to 22 Welbeck Way, London, W1.

Mr W. H. John Baverstock [*A*] has changed his address to Melville Chambers, High Street, Sandown, Isle of Wight (Sandown 16).

Mr Michael J. Briggs [*A*] has changed his address to 16 Hillview Court, Guildford Road, Woking, Surrey.

The present address of **Mr Y. M. Chandawarkar** [*A*] is 6–165E Dr Ambedkar Road, Dadar, Bombay 14, India.

Mr S. L. Donovan [*A*] has changed his address to c/o PWD, Maxwell Road, Kuala Lumpur, Malaya.

Messrs Feast and Anderson [*AA*] have moved to new premises and are now practising at 38 Gloucester Place, Portman Square, London, W1 (Welbeck 2341–3).

Mr John M. Gledhill [*A*] has changed his address to 8 Parkside Close, West Bank, Acomb, York (York 71964).

Miss M. Jean Hanney [*A*] has changed her address to Whitefoot, Burneside, Kendal, Westmorland, and she will in future practise under her married name, **Mrs M. Jean Dunkley.**

Mr Ivor Hollingsworth [*A*] has changed his address to 'Acanthus', Brynsea Road, Congresbury, Somerset. Mr Hollingsworth has taken an appointment with **Messrs Angus McDonald and Partners** [*F*], 1 Unity Street, College Green, Bristol 1.

Mr K. D. James [*A*] has changed his address to 59 Hidcote Road, Oadby, Leicester.

Messrs Knapton and Deane [*F*] have moved to new offices at 11 Catherine Place, Westminster, London, SW1 (Victoria 0053), and have changed the name of the firm to **Knapton Deane and Partners.**

As from 1 April 1961, the address of the London office of **Messrs Manning and Clamp** (Mr T. F. A. Manning [*A*] and Mr H. J. D. M. Clamp [*A*]) is 37 Norfolk Street, Strand, London, WC2. The address of the Richmond office remains unchanged at 19 The Green, Richmond, Surrey.

Messrs Cubitt Nichols, FRICS [*F*] have moved from 37 Norfolk Street, Strand, London WC2 to larger offices at 6 Bolton Street, Piccadilly, London, W1 (Grosvenor 7517–8).

Messrs Pearce-Bottomley (Mr Anthony Le M. Pearce [*A*] and Mr Derek S. Bottomley [*A*]) have moved their practice from Circle House, 29 Lady Lane, Leeds to 5–7 New York Road, Leeds 2. The telephone number, Leeds 23262, remains unchanged.

Mr John Powell [*A*] has changed his address to 54 Mount Road, Hinckley, Leicester.

Mr A. Budge Reid, AMTPI [*A*] has changed his office address to 16 Charlotte Street, Bristol 1 (Bristol 2–7937).

Mr George H. Rice [*A*] has changed his address from Kingston, Ontario, Canada, to 105A Widmore Road, Bromley, Kent, where he will be pleased to receive trade literature relating to hospitals.

Mr G. B. Smith [*A*] has changed his address to 1 Sandhurst Crescent, Liguanca, Kingston, Jamaica.

Messrs Tasker, Cassidy and Campbell [*AA*] have moved their practice from 12 Montagu Place, London, W1 to 1 Wardrobe Place, Doctors' Commons, St Paul's Church Yard, London, EC4 (City 6184).

Mr R. H. Turner [*F*] has changed his address to 195 Malden Road, New Malden, Surrey (Malden 2191).

Mr Denis R. Wilkinson [*A*] has changed his address to 2345B Larkin Street, San Francisco 9, California, USA.

Mr G. F. H. Woodcock [*A*] has changed his address to c/o PO Box 206, Kaduna, Northern Nigeria, where he will be pleased to receive trade catalogues.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Established London architects with busy practice (commercial, industrial and housing) require qualified assistant architect with some experience, with view to partnership. All replies treated in strict confidence. Box 238, c/o Secretary, RIBA.

Architect (qualified) with about five years' experience required for expanding practice in East Midlands city, with view to partnership after probationary period. Car owner/driver. Box 239, c/o Secretary, RIBA.

Member [*F*] AA Diploma, with an established practice in east Somerset with well-appointed and delightfully situated offices and at 61 wishes to take life a little more easily, would like to hear from any member who would be interested in discussing the possibility of assistance, with a view to partnership and/or taking over the practice in the near future. Box 240, c/o Secretary, RIBA.

Experienced Associate required as partner to assist on current work and with view to taking over in near future small general practice in Midlands. Car and capital required. Box 241, c/o Secretary, RIBA.

Practising member contemplates retirement and disposal of well-established small, general practice in west Midlands. Replies strictly private. Box 242, c/o Secretary, RIBA.

Established practice in provincial town available to a young energetic qualified man. Retiring principal would remain in an advisory capacity for a reasonable period for a small remuneration. Box 244, c/o Secretary, RIBA.

Experienced architectural assistant required in East Anglian town to take charge with a view to partnership. Applications in own handwriting with full particulars will be treated in confidence. Box 245, c/o Secretary, RIBA.

ACCOMMODATION

Self-contained fully equipped architects' suite to let, 422 sq. ft., principals and drawing office, Barbour index, print machine, newly decorated, well lit, lift – London, WC1 district, would consider disposal of lease. Box 230, c/o Secretary, RIBA.

MISCELLANEOUS

For sale. Arclight horizontal photo copier 54 in. with ammonia box and carbons. Box 237, c/o Secretary, RIBA.

Vitesse Camera specially adapted for architectural photography with rising front and Ross 1: 3: 5 lens. Takes standard roll film. Recently tested. £15. Box 243, c/o Secretary, RIBA.

For sale: robust oak drawing cabinet, adjustable shelves for sheets 37 in. by 25 in. maximum, with adjustable working top. Box 246, c/o Secretary, RIBA.

Mr D. J. Vickery [*A*], The Head of Department of Architecture, Nigerian College of Technology, Zaria, Northern Nigeria, will be pleased to receive trade literature and samples.

The Royal Institute of British Architects, as a body, is not responsible for the statements made or opinions expressed in the JOURNAL.

ABS

Car Insurance

The Architects' Motor Policy arranged with underwriters at Lloyds offers attractive terms to architects and their assistants. The scope of the cover provided is wide and business use is included without the additional premium normally charged in this connection. Loss of professional instruments by theft from the car is included in the cover.

The premium rates agreed upon for this Scheme show an attractive saving on those normally required by the underwriters. These special terms will not apply to high performance sports cars or to motor cycles or scooters for which quotations will be obtained on request.

Full particulars will be sent on application. May we suggest that you inquire now so that you have details before you when the renewal of your existing insurance falls due? Inquiries to:

The Manager,
ABS Insurance Agency Ltd,
66 Portland Place,
London, W1
(Telephone: Langham 5533)

Correspondence

Architectural Education

Sir, – There is a fundamental difference of approach by the students which should be treated with caution. Nowadays they march about with slogans, criticise their tutors in public, shout 'Viva Somebody-or-other', and even try to assassinate political leaders. This is a time-honoured custom.

I think attempted assassination should be shunned in matters of Architectural Education, as it is my belief that there is no substitute for experience, and clearly they do not agree.

All full members of the Institute *have been* architecturally educated by one of the available methods and somewhere between the school and pupilage methods should be a compromise which would be widely supported as retaining the best of both.

At my meeting with the BASA representatives, I put forward personal views which are summarised in the following notes, and as I too 'have spent much time, energy and cash in studying these problems', I hope the Board will consider them seriously.

1. 1st year
   Articled pupil, with day release classes, and history, *then* PROBATIONER on recommendation, without essential 'A' levels.
2. 2nd year } at SCHOOL
   3rd year } or OFFICE:
   Practical groundwork based on actual jobs, or by tutors who have done actual jobs. Similar to German type of training if at school.
   Tutors to be practising architects invited from proof of their ability to produce good sound architecture. Used as tutors on short-term basis – pay equivalent to earnings on architectural work.
3. RIBA INTER (based on testimonies of 2nd and 3rd year).
4. 4th year }
   5th year }
   Concentration mainly on design – preferably spending most time at Schools (but with better status for smaller provincial Schools with travelling tutors). Tutors to be practising architects who have won distinction in design. Each design to be carried through after approval to working drawings and details and specification.
5. 6th year }
   7th year }
   Back to original office for training in business management, day to day practice, then RIBA FINAL on carrying a job through from start to finish.

EWART B. REDFERN [*A*]

Sir, – Reports, papers and letters on architectural education proliferate. As Mr Hilary Chambers in your December issue so rightly remarks, architectural education is a subject upon which architects as a whole ought to have views, but the very complexity of the subject prevents general understanding of the basic issues involved.

Is the practice of architecture to be a pseudo-scientific-intellectual activity, or is it to re-establish itself as the Art of Architecture? Lethaby wrote 'At the inner heart of an ancient building were wonder, worship, magic and symbolism; the nature of our own age must be human service, intelligible structure and verifiable science'. These prophetic but depressing words seem to have come to pass. If the practice of architecture is to be a highly skilled technical process, carried out with good taste, then by all means insist on five 'O' and two 'A' levels from all entrants to the profession. But if at the highest level the practice of Architecture by '*whole architects*' is to be primarily an Art, then the absolute insistence on a particular academic level may well shut out of the profession those most likely to have the vital spark, and almost certainly, most of the few heaven sent architect-geniuses likely to be alive at any one time. The really worth while architect is born not trained.

The insistence on two 'A' levels is not going to redress the condition in which the Rome Scholarship in Architecture is withheld from award. The awful importance of such an event should, in the words of the Editorial in *The Builder* (14 October 1960) 'stir even the most mentally inert to enquire into the state of architectural education in the recognised schools today'. The first task of the new Educational Advisory Council on Art Education has been to devise a three year Course with a single diploma, and whilst generally insisting on a high academic standard for entry to the Course, the Council have not forgotten that it is an Art they are concerned with; and vide *The Times*, 23 November 1960, 'even reserving a place in the academic sun for gifted students who are . . . temperamentally allergic to conventional education and of anti-specialisation'. Can Architecture afford to do less?

The passing of a single external examination by those aspiring to be architects would be a salutary discipline to all concerned. It would also remove the fears which undoubtedly exist that the 'recognised school exemption' forms a cushioned and unrealistic mode of entry. Further, the single external examination would permit of the existence of several different modes of training; an essential if architecture as an art is to survive.

Recently much has been heard about a two-tiered profession. There can be no doubt that at the present time it is difficult to find a newly qualified architect who is able to perform, *efficiently and expeditiously*, the tasks which an assistant in an architect's office ought to be able to perform. The profession is becoming an army staffed entirely by self-styled generals. To remedy this a corps of technical assistants has been proposed, whose training would be more *practical* than those who would achieve Associateship. But the dangers of such dilution are great. There is no need for a two-tier profession if it were to be officially recognised that the *minimum* level in the architectural hierarchy is Associateship; that this level means a comprehensively trained architectural assistant or assistant architect – the '*half architect*' – and nothing more. If Associateship has this meaning it would be necessary to improve the status of the Fellowship so that it becomes the recognised means of distinguishing the *complete architect*. In addition, official recognition of the small body of really good *complete architects*, likely to be living and functioning at any one period, by a designation such as *Master of Architecture* would complete the triumvirate.

Thus, the aim of all modes of training might well be general comprehensive technical competence for all members of the profession – all to the level of *half architects*. From that stage new modes of selection and training would need evolving whereby those *half architects* who are sufficiently gifted might become *whole architects*. In addition, a method whereby those who emerge (very possibly without organised advanced training) as *complete architects* could be discovered and promoted to the Fellowship would be essential.

GEORGE G. PACE [*F*]

Water of Leith Mission. Very early work of the late Sir Ninian Comper

The late Sir Ninian Comper

Dear Sir, – I was a little surprised that your otherwise interesting obituary notice for Sir Ninian Comper did not mention any of his work in Scotland, and in particular in his native city of Aberdeen. To commemorate the 150th anniversary of the consecration of the first American Bishop by three Scots Bishops, in secret, in Aberdeen in 1784, St Andrew's Scottish Episcopal Cathedral there was enlarged and entirely re-decorated inside by Comper, between 1934 and 1945. His superb ciborium of guilded renaissance columns supporting the arches of a symbolic crown, and the armorial treatment of the aisle ceilings, one devoted to the Arms of the North American States and the other to the Aberdeenshire families who remained loyal to Church and King in Stuart times are amongst his most colourful and successful creations and should surely be known south of the Border, they are certainly not ignored across the Atlantic! But then American funds largely paid for them!

There are other works by Comper in the 'Granite City', St Margaret's in the Gallowgate for instance; and a very early effort in the Sanctuary of the Mission Church at the Water of Leith, Edinburgh, not to mention a sumptuous Rood Screen, and complete set of vestments, banners, processional crosses, Bishop's Crozier, Chalices and Altar furniture in St Ninian's Cathedral, Perth. Many members come to Scotland and would, I am sure, be interested to know where they will find examples of Comper's work 'at home', so to speak.

Yours truly,

HUBERT FENWICK, ARIAS [*A*]

Practice Query No. 1

Dear Sir, – We were interested in your reply to 'Practice Query No. 1' in the March issue of the JOURNAL, since the problem of

charging fees when the tenders received have exceeded the client's target figure is a familiar one to our firm.

We agree wholeheartedly with your questioner's view that it is difficult to estimate the cost of alteration work until the sketch plan stage at least. Indeed, from past experience, we would go further and express the opinion that the size of the tenders is, in many cases, governed by factors quite beyond the architect's control, however carefully he may have tried to fit his scheme to the client's budget.

We interpret your quotation from 'The Law Relating to the Architect' to mean that *if* the whole benefit of the architect's service to the building owner is destroyed – which in our experience is by no means always the case – he is not entitled to a fee. This seems a hard judgement in view of all the work which may well have been put into the job.

It also seems relevant to mention the 'Partial Services' section of the Conditions of Engagement, where at each stage the fee chargeable is directed to be a percentage on the architect's estimated cost of such works, which would presumably be the building owner's target figure or less. This seems at variance with Mr Rimmer's opinion that in many such cases no fee would be recoverable.

Yours faithfully,
AUBREY JENKINS [*F*]

(No one will expect an architect to be able to estimate so accurately that the client's target figure is exactly achieved: a reasonable latitude must be allowed, but it is not possible to say what that latitude should be in every case. For example, whilst 5% might be regarded as reasonable in a job costing, say, £5,000 it would not seem to be reasonable in a job costing £500,000. Assuming the architect to have been fully briefed at the outset and in turn properly to have informed his client when he felt that the latter's requirements could not be achieved within the target, then if the lowest tender in fact exceeds the target figure by more than a reasonable amount the explanation would appear to lie only in the architect's negligence where there has been no obvious change of circumstances between the date of the architect preparing the scheme and the date the tenders were received. It must not be assumed that all clients are able to pay more than they have disclosed to the architect as being their target figure. This might be so in the case of large industrial clients but in the case of the small building owner, requiring an architect's services once in a life time for the purpose, say, of designing a private house, it is unlikely that he will be able to afford any more than a reasonable amount beyond his disclosed target figure. Therefore where the difference between the architect's estimate and the tenders is so wide as to be unreasonable, the architect's services may in fact prove to have been of no practical value at all to the client. In those cases in which it appears the architect has been negligent in not properly advising his client, it would seem that no fees could be claimed. In such cases, where the client has already made a part payment of fees, say at sketch plan stage or at bye-law approval stage, it is submitted that the amounts so paid could be recovered from the architect. Secretary, Practice Committee.)

The IUA Congress Offices at 66 Portland Place. To house them part of the basement store has been converted. Architect: Anthony Williams [*A*]

UIA LONDRES 1961

Guides and Interpreters

The organisers of the Congress are extremely grateful for all the offers of assistance which they have received to act as guides and interpreters during the Congress.

So many have been received that no further offers can be accepted for interpreting French or German. However, the organisers would still be glad to hear of architects able to speak Russian or Spanish and who may wish to help as official guides and interpreters.

Private Hospitality

The members of the Architectural Association are planning to entertain visiting members of the Congress in their homes on the evening of Monday 3 July, the opening day of the Congress. So far more than 1,100 offers of private hospitality have been received from London architects.

Congress Registrations

Up to the time of going to press 1,049 members of Congress had registered. Of these 620 are Full Members, 219 Associates, 89 Observers, 43 Students, 47 Working Honorary and 31 Ordinary Honorary; there are 44 Lady Members and 221 of the Associate Members are ladies. Registrations have been received from the following 51 countries: South Africa (7), Argentina (14), Austria (2), Australia (10), Belgium (9), Brazil (13), Bulgaria (3), Canada (5), Chile (2), China (6), Cuba (3), Czechoslovakia (1), Denmark (6), Dominican Republic (1), Egypt (6), Eire (3), Fiji (1), Finland (6), France (82), Germany, East (25), Germany, West (20), Greece (4), Hungary (12), India (1), Iraq (1), Israel (18), Italy (14), Japan (8), Korea (7), Luxembourg (13), Lebanon (1), Mexico (44), Malaya (1), Netherlands (14), New Zealand (2), Norway (2), Pakistan (2), Poland (8), Portugal (4), Southern Rhodesia (1), Spain (40), Sudan (1), Sweden (10), Switzerland (12), Salvadore (1), Turkey (2), United Kingdom (496), USSR (27), USA (68), Venezuela (2), Yugoslavia (9).

Exhibition Contributors

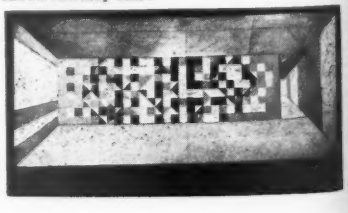
The following countries have submitted contributions to the 1961 Congress International Exhibition: Bulgaria, China, Colombia, Cuba, Czechoslovakia, France, East Germany, West Germany, Greece, Holland, Hungary, Italy, Japan, Mexico, Poland, Portugal, Rumania, Spain, Sweden, Switzerland, Turkey, USSR, USA, Norway, United Kingdom.

An exhibition of Soviet building materials and techniques will be included in the Soviet Trade Fair, to be held at Earl's Court from 7–29 July.

Working Groups

The Secretaries appointed by the Organising Committee for each of the three working groups are: Mr S. Meyrick [*A*] (the Architect to the University Grants Committee), Mr J. M. Austin-Smith [*F*] (an Architect in private practice) and Mr George Atkinson [*A*] (Architect, BRS).

On page 195 of the March JOURNAL the illustration of Mr John Ernest's sketch for wall in the Press Room of the IUA Headquarters Building on the South Bank was printed the wrong way up. It is shown correctly below



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Practice Notes

PRACTICE QUERIES

1. Architects' Signboards

Q: I would like some information about the use of the new architects' signboards. Can I use these outside my own office?

A: Two newly designed standard signboards measuring 8 ft by 2 ft and 4 ft by 1 ft have been approved by Council. The larger board is for display on buildings where the use of a smaller board would be inappropriate or difficult to read. It is left to the discretion of members to decide which board is appropriate for a particular job.

These boards may only be used on buildings in the course of construction. They are not suitable for exhibition outside an architect's office.

2. Partnership Agreement

Q: I am proposing to enter into partnership with another architect. Can you give me any advice on the means of drawing up an appropriate partnership agreement? Is there an RIBA Form of Partnership Agreement?

A: There is no RIBA Form of Partnership Agreement but the Practice Committee have set out a number of heads of terms for such an agreement which you may like to consider before entering into a Deed of Partnership. This should be drawn up by a solicitor.

1. Date of commencement of partnership, or date upon which it is deemed to have commenced.
2. Firm name (Registration under Business Names Act 1916 may be required[1].)
3. Place(s) of business.
4. Bankers and provisions for signing cheques.
5. Capital of partnership. Contributions of partners and shares attributable to each (e.g. equal). Provisions for further contributions. Alternatively the amount required for the purchase of a share in an existing practice by an incoming partner.
6. Division of profits and losses between partners (e.g. in like proportion to capital credited to each).
7. What property in the names of individuals is to be transferred to their joint names to constitute part of the partnership assets, and any terms concerning the consideration for such a transfer.
8. The amount of periodic cash drawings by each of the partners.
9. Auditors – accounts – period of accounting – basis of accounting (e.g. profits accrued but not received) – provision for signature of accounts thereby constituting conclusive evidence between partners (if required) – subsequent division of net profits.
10. Duties of each partner – prohibitions on activities outside partnership – the like within partnership.
11. Modes for determining partnership (e.g. six months' notice in writing [after ..... years]). Provisions applicable in such case as to the division of the assets of the partnership including copyright and work on hand.
12. Provisions as to death, bankruptcy, lunacy or misconduct of partners – mode of ascertaining price to be paid if option to purchase given – any provision for widow of deceased partner – mode of payment. Provisions also as to disqualification of one partner from practice as an architect by ARCUK.
13. Provisions as to the partner(s) ceasing to be bound by the Agreement and not continuing in practice at the partnership address(es) not practising within ..... miles of those places of business (must be reasonably necessary for the protection of the business).
14. Provision for Arbitration in the event of disputes.

N.B. These Heads of Agreement do not apply in the case of salaried partners.

3. Architects' responsibility

Q: Is it the architect's responsibility to institute a search concerning covenants and other encumbrances on a property where a building is to be erected, or is it the owner's or his solicitor's task to inform the architect of the existence of such?

A: The question which you raise is a legal one and I do not think I can do better than quote the following extract from *The Law* QC: *relating to the Architect* by E. J. Rimmer.

> 'The relationship between a building owner and his landlord or the restrictive covenants under which a building owner holds his land are matters of which the architect can have no precise knowledge unless he is expressly informed by the building owner and generally an architect will be entitled when employed for a specified building project to assume that the building owner is entitled, without seeking consent from landlord or adjoining owner, to carry out the construction. This general statement may, however, need qualification if the character and nature of the building project is such as should put him on enquiry in regard to the building owner's right. For example, if the building project is of such a height or in such a position or of such a character as would raise in the mind of a reasonable architect the probability that serious damage would be inflicted upon adjoining property the question whether or not the building owner is entitled to cause such damage would also arise in his mind. It is submitted that in such case the architect would be under a duty to enquire from the building owner what his precise rights were in the matter before proceeding further with the work. If he were denied the fullest information on the matter or given instructions to proceed without full information after such enquiry then he would do so without any further responsibility.'

[1] It is necessary for registration to be undertaken pursuant to the Registration of Business Names Act 1916, if the firm name does not consist simply of the surnames of the individual partners without addition other than their Christian names or initials. Changes in the partnership of a firm subject to registration are also registrable.

The certificate of registration must be exhibited in a conspicuous position in the principal place of business and the names of the partners must appear on all business letters etc. on which the firm name appears.

STANDARD METHOD OF MEASUREMENT OF BUILDING WORKS

Supplement to the Fourth Edition of an Alternative Section XVI 'Heating and Ventilating Engineer'. The Association of Heating, Ventilating and Domestic Engineering Employers have issued the above Supplement dated December 1960.

In a letter of 3 March 1961 the Association explain that this Supplement will be incorporated in any revision of the whole Standard Method of Measurement. It does not constitute any change in policy: the normal method of tendering in the Heating and Ventilating Industry continues on a lump sum basis. It is considered, however, the letter continues, that since on occasions a priced Bill of Quantity is required for valuing variations it is in the interest of all concerned that the Bill should be prepared on an up-to-date common basis approved by the Industry.

It must also be noted that it is accepted practice that only the contractor whose lump sum tender is the lowest, will submit on request a priced Bill for use solely in the valuation of *variations*.

Another important point is that the Supplement specifically lays down in the General Principles that adequate drawings and specifications of the schemes shall accompany the Bills of Quantities.

The Supplement is published by the Royal Institution of Chartered Surveyors and the National Federation of Building Trades Employers.

ABS

Negligent Survey: Indemnity Insurance. These Notes in February last included a review of the legal position where defects such as wood infestation or bulging walls are overlooked in the course of survey of a property for a prospective purchaser.

Recognition of the responsibility assumed by the architect preparing such a survey report underlines in the most emphatic way that an adequate Professional Indemnity Insurance is essential in private practice.

The standard Indemnity Policy covers the architect (up to the amount of indemnity he may fix) for any 'amount which he may become legally liable to pay in respect of any act of negligence, omission or error'. In addition to this, legal costs and expenses involved are covered by the policy. Claims which prove to be groundless are not infrequently made against professional men in the course of their work. The Indemnity Policy, of course, covers the legal expenses, often substantial, which are involved in rebutting such a claim.

At the present time all policies include a wood infestation clause which requires the architect to record in all appropriate survey reports that detailed examination of floor joists, wall plates, roofing timbers etc., has not been possible, and that no guarantee or assurance of freedom from wood worm or other infestation can be given. Subject to this the policy fully protects the architect in the event of any claim arising subsequently in this connection.

The ABS Insurance Agency Ltd has given special attention to the facilities available at Lloyds and through the Insurance Companies for Professional Indemnity cover. As a result of the Underwriters' unfavourable claims experience which has extended over a number of years the market is restricted and premium rates have increased very substantially. The Manager of the Agency, at 66 Portland Place, will be glad to offer advice or assistance on request.

Modern Architecture and the Historian or the Return of Historicism

By Professor Nikolaus Pevsner, CBE, PHD, MA, FSA [*Hon. A*]
Given at the RIBA on 10 January. The President, Sir William Holford, in the Chair

The relation between the architectural historian and the contemporary architect has changed fundamentally in the 20th century. In the 19th century, the architect, with a few notable exceptions,[1] was the architectural historian. As a historian, he would go and visit buildings of the past, draw them, measure them, describe them and date them, and would then go home, turn architect, and build more or less free imitations of what he had seen. But when, at the end of the 19th and the beginning of the 20th century, there arose a generation of giants, who created a new style of architecture entirely independent of the past, one might have thought one had a right to assume that historicism was at an end. The historian now did his job and the architect did his, and while the personal relations between the two might remain warm, their relation was bound to be no longer the same.

My principal job tonight is to draw attention to what I regard as an alarming recent phenomenon. It is what I chose to call 'The Return of Historicism'. This is, in my opinion, one aspect of a deeper change and, again, a change which represents to me one of the least attractive developments of recent architecture, although no doubt one which has been very highly attractive to others.

The change, generally speaking, is this. The principle of 20th century architecture up to this change had been that of form following function, in the sense that a building must first of all function well and should have nothing on its exterior to reduce its well-functioning, or, to put it the other way round, that the beauties of exteriors of buildings and, for that matter, of their interior spaces as well, must be developed subsequent to the assurance of their well-functioning. The new tendency is, if I am right, towards exteriors which are created not necessarily at the expense of function, although that is very often true too, but certainly at least with an expression which does not convey a sense of confidence in their well-functioning.

The return of historicism is one aspect of this change, and it is the one on which I shall concentrate for most of the time I have got tonight.

Historicism is the trend to believe in the power of history to such a degree as to choke original action and replace it by action which is inspired by period precedent. In that sense, in the 19th century, if you take philosophy as an example, the primary interest of the philosopher was the history of philosophy at the expense of new systems; if you take theology, the primary interest was the history of religion, again at the expense of new systems. That this kind of historicism was the almost universal trend in architecture I need not emphasise.

Then, what happened historically is known to everybody. There was, at the end of the 19th century, the episode of Art Nouveau, which represents the first phase in the creation of completely new forms – the first such phase since the Rococo. There followed the earliest phase of the so-called Modern Movement. This was just as original in its forms as Art Nouveau, but it was, at the same time, propelled by an urgent quest for the fulfilment of function. Then, as a second episode, we had, for a few years, partly during and partly after the First World War, Expressionism, again fanatically novel in its forms, but not sharing with the early Modern Movement the regard for function. Finally, about 1925, we witnessed what we thought was the victory of the so-called Modern Movement, and we are now so used to it that we tend to forget the courage, the intellectual effort and the imaginative effort that was necessary to bring about not only its formal expression but even more its functional discipline.

Where was it going to lead? The so-called International Style of the '30s was an exacting style. It was not a bit accommodating, and so a retreat from it began before it was universally accepted. It began before the Second World War, and it took, as you will see, at once the form of a return to historicism, although quite an innocent one. Don't misunderstand me. I am not going to talk tonight of the new buildings designed by Georgian-Palladian diehards for the farmers and the financiers of the Farmers' Union and the *Financial Times*. That sort of thing can be left to die of old age. It is not what I am concerned about.

Instead, the phenomenon which interests me and which I mean by the return to historicism is the imitation of, or inspiration by, much more recent styles, by styles which had never previously been revived. Of course, all reviving of styles of the past is a sign of weakness. Independent thinking and feeling matters less than the choice of patterns.

Now let me give you my list of what you are going to see on the screen in a few moments. There is, first, what I have already mentioned: the earliest retreat. You may call its result neo-Accommodating. Then there is neo-Liberty, the most talked about of these revivals. There is neo-Art Nouveau, which includes neo-Liberty and also includes neo-Gaudí, there is neo-de-Stijl, there is neo-School-of-Amsterdam, there is neo-German-Expressionism, and finally, to a certain extent, neo-Perret.

So we come to the pictures and you can sit back for a while and just see the examples which I have prepared and which I hope will illustrate the point I want to make.

Figure 1 is a shopping centre of 1945 in a suburb of Gothenburg in Sweden[2] and shows very well this new attitude of just before and after the war towards something more friendly, something more relaxed, something less exacting. Figure 2 is a detail, and it is actually of 1910 and represents Tessenow, who was one of the 'not whole-hoggers' at the moment when the Modern Movement was created.[3] I think the connection between a mild 1910 and a mild 1945 is at least worth noting even if there may be no historicism, i.e. no imitation by the one of the other. On the other hand, Dr Banham kindly gave me figure 3. This bed is not from a catalogue of Heals of about 1910 but from the Triennale of last year.[4] That, I would call an extreme case and a very puzzling one.

Now neo-Liberty. Dr Banham, to whom I owe a great deal in the preparation of this talk, has drawn attention to neo-Liberty, by writing on it and broadcasting on it.[5] He also kindly showed me his photograph of this extraordinary lamp (figure 4), shown again at the Triennale in 1960.[6]

Neo-Liberty, as I said, is only one aspect of neo-Art Nouveau. The historian can document this revival particularly well in terms of a series of

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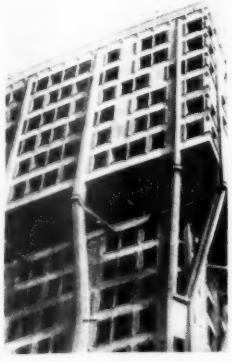

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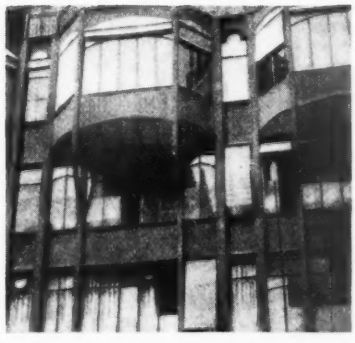

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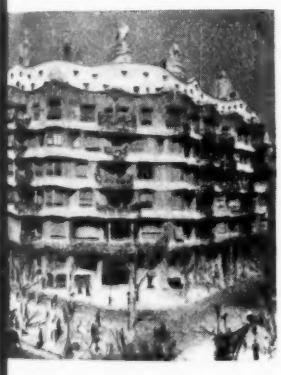

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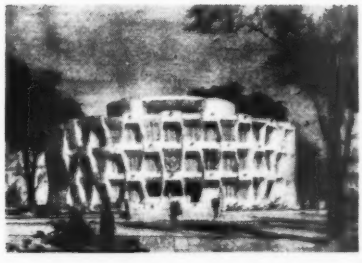

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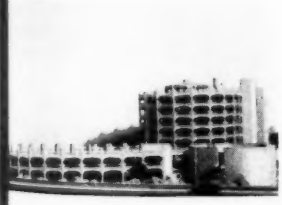

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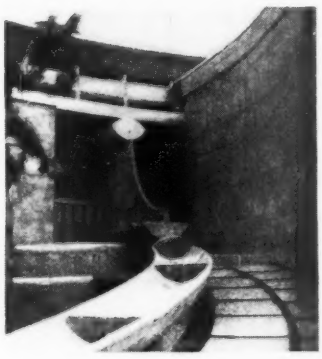

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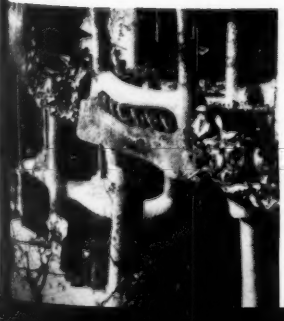

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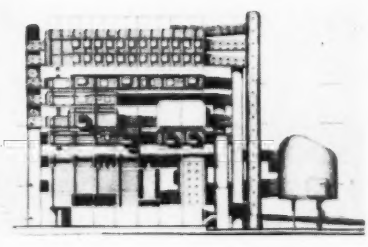

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exhibitions held and a series of publications brought out. The first exhibitions, which took Art Nouveau seriously, were the exhibition arranged in 1952 by the late Peter Floud at the Victoria and Albert Museum and called Victorian and Edwardian Decorative Arts, and in the same year, the exhibition at Zürich which was called 'Um 1900'. They were followed by exhibitions at Frankfurt, the Gaudí Exhibition at the Museum of Modern Art in New York in 1957–58, and last year, the Museum of Modern Art's special Art Nouveau Exhibition. Finally, at the moment, in Paris, there is the Exhibition called 'The Sources of the 20th Century' which includes, in the field of architectural photographs and actual works of design and craft, a very full display of the period of Art Nouveau.

Now a side step – and I do this with some hesitation. I want to show you a detail of the Torre Velasca in Milan (figure 5) by the Peressutti-Rogers Group, and side by side with it a photograph from *Casabella*, which is edited by Ernesto Rogers, and which shows the store in Paris called 'Le Parisien'. The store is by Chédanne and of 1904 (figure 6).[7] Of course, the connection here may actually have worked the other way round. It may well be that the Peressutti-Rogers Group, seeing the accidental similitude thought it rather amusing and illustrated the building for no other reason.

Neo-Gaudí takes us a good deal further. Figure 7 is the Casa Milá, by now a very familiar sight. Figure 8, without comment, is the design by John Johansen for the American Embassy in Dublin;[8] and figure 9 a model by Howell and Killick for the new Science Building at Birmingham University. Figure 10 is a detail from a villa by Marcello d'Olivo,[9] and figure 11 a detail from the Casa Milá. I apologise for this. There may be more convincing details than this one. Here again, for the historian, the documentary evidence of the revival is very striking. Nothing could be more so than the fact that the first volume to come out in a recent American series of monographs on 'Masters of World Architecture' has Gropius out and Gaudí in. Also in this first set they were all live architects except for Gaudí. At Barcelona, if my counting is right, there have been seven books on Gaudí since 1955, and one of them has a foreword by Le Corbusier who, always eager to present himself in the best light, uses his foreword to say that, already in 1928 'I told you so'. The most recent book on Gaudí is the excellent book by Sweeney and Sert, which is a fighting book; but perhaps the fight was no longer necessary.

Students of the last few years have out-Gaudí-ed Gaudí quite easily as figure 12 demonstrates. And again, I must confess that it baffles me to read

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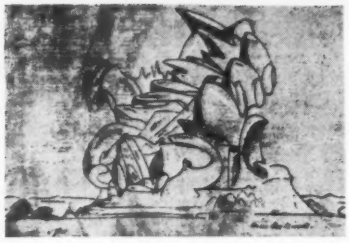

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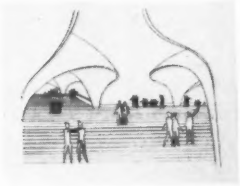

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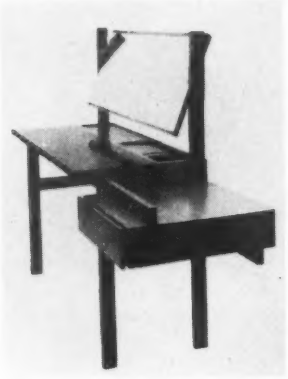

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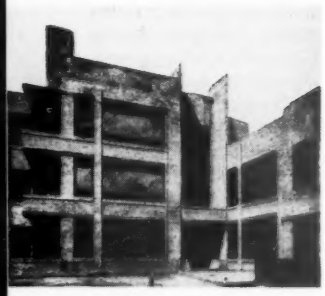

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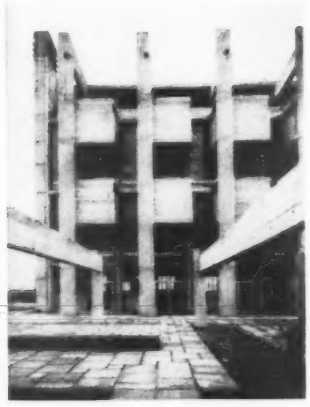

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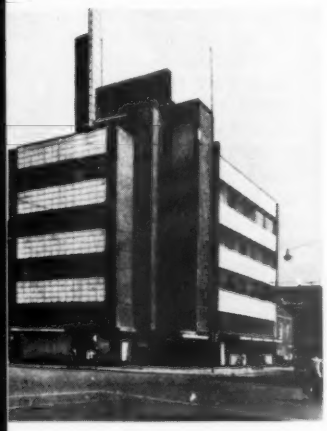

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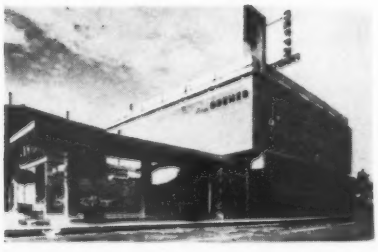

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in the *Architectural Review*,[10] James Gowan commenting on this actual design and saying that this is 'a particularly fine example of the work done recently at the Regent Street Polytechnic and their rather specialised preoccupation with structural techniques'. The building purports to be showrooms of the Furniture Manufacturers' Association. Now figure 13, some teapots, and figure 14 a design for an Arts Centre: would you agree that they represent the same kind of approach to a job? Well, the teapots were published in 1924 to 1925 and are by the Dutch designer Jan Hassel de Groot.[11] The Arts Centre is by a German architect Hermann Finsterlin, who appeared like a flash about 1919. I could not quite find out whether this actual design is of 1919, 1920 or 1921.[12] So we have here, after the extremism of 1960 the extremism of 1920–25. In both cases of course such fantasies remained on paper.

Now there are also undeniable visual affinities between Finsterlin's Arts Centre and figure 15. But these affinities would of course be invalidated, if one can regard the set of sail or shell shapes of Utzon's design for the Sydney Opera House as a matter of structure. To decide that is not my job tonight. But I was interested to see that Nervi in *Casabella*[13] called the Sydney Opera House 'an eloquent example of the most straightforward anti-functionalism from the point of view of statics as well as construction'. So perhaps the Arts Centre and the Opera House do belong together, a little more than I would at first have assumed. Mind you, this parallel must be taken for the time being without critical implications of any kind. It is, I think, out of the question that Utzon knew of Finsterlin, and it is also at least arguable whether for so festive a building as an opera house, in so spectacular position as the Sydney Opera House will have, strictly functional forms would not have been too severe. To this I shall revert later.

So now neo-de-Stijl. Figure 16 is some of the celebrated furniture designed by Rietveld about 1917–18, and figures 17 and 18 are a recent dressing table by Howell, Killick and Partridge,[14] and another exhibited recently by the Central School of Art and Crafts and commented on in the DIA Year Book. In architecture, neo-de-Stijl is, I think, just as striking. Figure 19 is a building at Harlem by the Dutch architect, J. W. E. Buys, illustrated in 1928,[15] and figure 20 shows not another view of the same building, but the Marchiondi Institute in Milan by Vittoriano Viganò of 1957.[16] Figure 21, again by Buys, is the Volharding, at The Hague, also of 1926, and figure 22 a café of 1958 by Marcello d'Olivo.[17]

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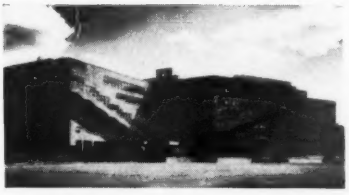

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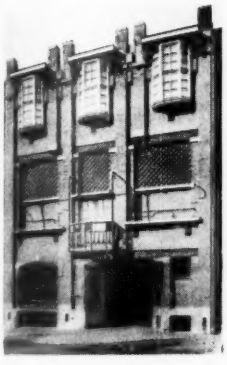

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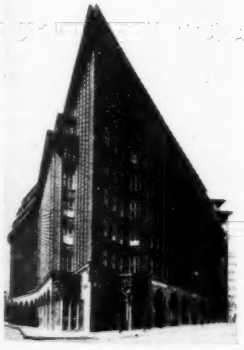

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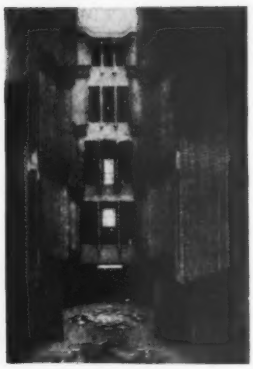
Comparisons of today with the School of Amsterdam are a little less straightforward. The only thing I can point out in figures 23 and 24 is the curious way in which odd bits, ledges and chunks of some kind, stick out of de Klerk's building in Zaan Straat and Stirling and Gowan's flats at Ham Common. Figure 25 is not the best picture one can find of a motif of the School of Amsterdam I want to draw attention to: the repeated rhythm of diagonals going across a smooth façade. As a comparison, figure 26 is Aalto's Dormitory at Cambridge, Mass., of 1947. Clearly influenced by the School of Amsterdam was this house at Brussels (figure 27) by a little-known architect, Pompe,[18] and my comparison (figure 28) is the Bottega d'Erasmo by Gabetti and Isola[19] at Turin. Perhaps I should draw attention especially to the odd window shapes.

As a postscript to this, I want to pronounce my puzzlement about the historicist return of some Italian architects to the work of the tamer and weaker Dutch architects of the '20s. I mean buildings like figure 29 which was illustrated in 1923 to 1924.[20] Just look at its details and then at these flats by Gregotti, Maneghetti and Stoppino, in Piedmont (figure 30).[21] However, I do not want to go on with this, because I do not think that it is an important trend.

But neo-German-Expressionism is. Figure 31, the Chilehaus in Hamburg by Hoeger shows one of the most familiar examples of this very sharp, angular, aggressive style which started in Germany at the end of the First World War, so different from the work of Behrens and early Gropius before the war. The same aggressive angularity appears in Bruno Taut's own house (figure 32). Now this also is paralleled, although not very closely, today. Figure 33 shows a country villa near Ivrea by Albini,[22] and figure 34 a French house by Claude Parent.[23]

There are also other aspects of German Expressionism which, I think, one can parallel. Compare, e.g. the central hall in Peter Behrens' I G Farben Building, at Hoechst (figure 35), which he did in the early '30s[24] with the similarly reeded and similarly polygonal walls of the courtyard in Saarinen's American Embassy at Oslo (figure 36). In Germany herself – and this is a comparison to which Dr Banham drew my attention – you find a revival of the familiar chunky '20s style, of e.g. the Liebknecht and Rosa Luxemburg Monument by Mies van der Rohe (figure 37) designed in his brief Expressionist phase.[25] This is of the mid-20s, and figure 38 is of the last year or so, a house in a suburb of Cologne by D. M. Ungers.[26] Then there is Hugo Haering's farm at Garkau of 1920 to



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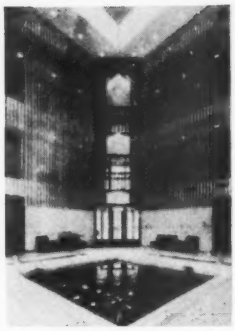

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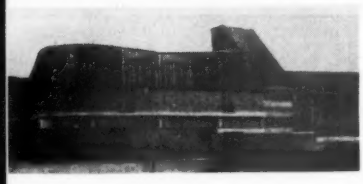

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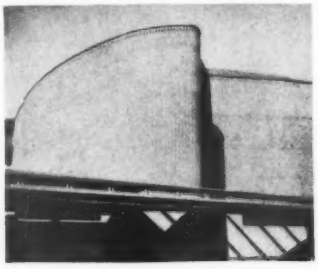

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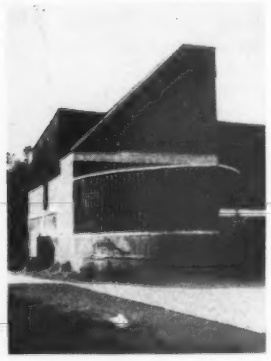

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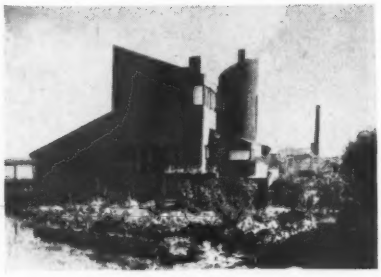

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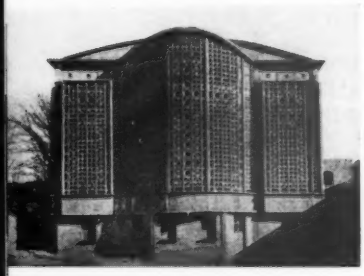

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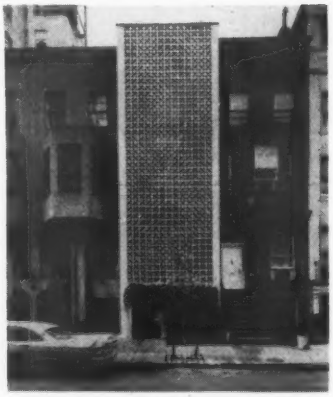

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1923 (figures 39 and 41) which has recently been rediscovered by Dr Joedicke and published in the *Architectural Review*, and their, of course independent, counterpart in recent work by Aalto (figure 40). Nor were Haering's motif and the expression he wanted to create confined to him. Figure 42 is a house by Byvoet and Duiker of 1925.[27] Finally a postscript to Expressionism. Perhaps one ought to call a revival of German Expressionism also some of the very best stained glass that has been done in this country in the last few years, including Evie Hone and John Piper, or is that a belated direct inspiration?

Neo-Perret is only a postscript too. All I am referring to is his favourite screens with which everyone is acquainted. Take his church at Le Raincy (figure 43) and then any of a large number of decorative screens as they are with us now. Figure 44 is Ed Stone's house in New York. However, here we must be careful, because for such screens there is, as everybody knows, a functional reason in countries in which there is strong sunshine. But the reason does, of course, not apply to Paris at the time of Perret and I do not know whether Ed Stone would say that it applies to New York. Where there is a functional reason for a screen in front of a façade, why should the screen not be given a pattern? That would certainly be the answer in South America. You see that I always stop short, where shapes and forms of the kind I am concerned with have a functional justification.

These were my last pictures, and that finishes my evidence for the moment. Now may we look to some problems raised by what you have seen.

The first thing is a piece of defence. Could you not say that the Return of Historicism is all our fault, and I mean myself in this case, personally, in two ways: (*a*) *qua Architectural Review* and (*b*) *qua* historian? The *Architectural Review* has got in the basement a Victorian pub, re-erected or rather re-assembled, and regarded by many as a blatant example of Victorian Revival. I do not agree, I would say that the pub in our basement is a 'folly' in the true sense of the word, and that the result of it, in the campaign of the *Architectural Review* for a new attitude towards the building of pubs was certainly not an attitude towards the building of Victorian pubs, but towards modern pubs with as much as possible of the atmosphere of the Victorian pub recovered, in opposition to the cheerless and soulless neo-Georgian or otherwise denuded pub.

Another Victorian indictment of the

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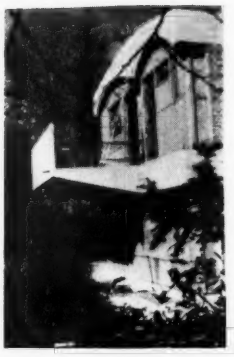

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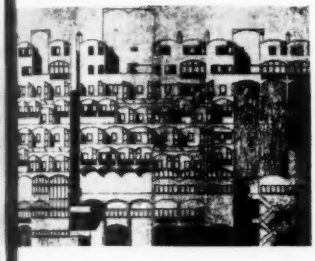

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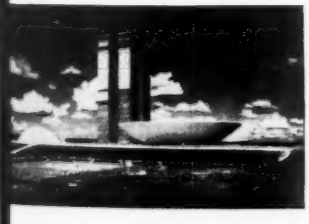

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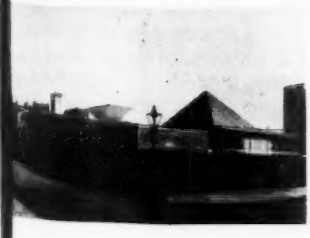

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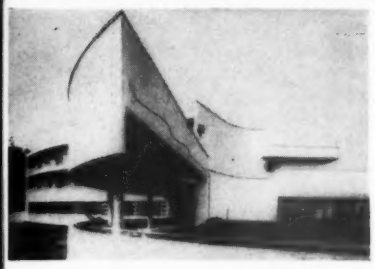
Review concerns its typography. It is true, we have been amongst the earliest to reassess Victorian typography and revive Victorian display faces. There has been an article by Alan Fern of Chicago recently in *Typographica* dealing with this problem.[28] He could trace back the renewed interest in bold and florid types to 1935, and personally, at least to a certain extent, to John Betjeman, who seems to have been interested in Victorian typography already when he was an undergraduate at Oxford, and published his memorable *Ghastly Good Taste*, with its famous title page, in 1933. But here again the position is slightly different from the Return to Historicism which concerns us tonight: ours is not a recommendation to cook *à la Victorienne* but rather a recommendation to spice with Victorian ingredients. It is, as I said before, entirely a question of display faces; it is not a question of Victorian *mise en page*, that is we use Victorian materials in undeniably 20th century layouts.

Now for the historian as such, and perhaps I should say, my own pitiable position in particular. I wrote a book on the Pioneers of the Modern Movement which came out in 1936, and which, at least for a number of the pioneers, was the first to present them to the English public. The book came out in a relatively small edition, and it did not sell well at all. In 1949, the Museum of Modern Art took it over and sales improved, until last year, it became a Pelican. So the book seems to have made its way and is now in the hands of several tens of thousands of people, we assume. Shouldn't I be very pleased? As a matter of fact I am not, because the book is certainly misunderstood by many as an encouragement to the new historicism, although, surely, its message is to show the creation and early development of the new style of the 20th century, and, in any case, the message of the historian, with whatever style or phase of the past he deals, is not to present it for imitation but to present it in its own right, to say: 'This is what happened in 1890 and 1910', leading up to the conclusion 'Here is a reason why 1930, 1940, 1950 should work in its own styles.' So, as far as Art Nouveau is concerned what really pleases me is that in Milan the façade of an Art Nouveau building has recently been re-erected as the centre of a modern block of offices (figure 45). The architects, Pasquali and Galimberti, must have felt that Cattaneo's Albergo Corso of 1907[29] was too good in its own right to be demolished and deserved to be perpetuated as a monument framed by their own stylistically completely different frame.

Now at last I feel I can turn to the question of why this return to historicism is taking place. There I can of course only make a few suggestions because any answer is bound to lead beyond my subject tonight. What I would say, to put it very elementarily, is this. When the really original people in architecture start doing funny turns, then the less original people will imitate the funny turns on the one hand and, on the other, will turn to where they can find similar things in the past, provided this interest in the past is not likely to be branded as historicism in the sense in which they had learnt to regard historicism, that is as an imitation of Gothic or Georgian or neo-classical forms. The styles imitated now are never-before-imitated styles, and they harmonise with the particular aspect of the last years which I disrespectfully called funny turns. The direct imitation of the funny turns themselves, that is of the highly original things done in the last few years, is, needless to say, a phenomenon which exists at all ages and is bound to exist. Amongst between-the-war examples I want to remind you only of the random-rubble-racket. Then, after the war, you had and you have for instance the canopies which curl up, or do a Hitler salute, or snake to the left or right, and in fact do anything they can do to avoid a straightforward statement of what a canopy is actually built for. A second example is from Le Corbusier after he had changed his style so drastically. It is that very characteristic motif of a heavy chunk of concrete with a segmental arch on the underside, as it appeared prominently in the Maison Jaoul (figure 46). That, as you probably know, has become a standard motif today (figure 47).

Then there are the Ronchamp windows; I need not tell you what a hit they have recently made. They have produced a whole litter. I have noted seven examples:[30] the beautiful church of the Madonna dei Poveri in Milan by Figini and Pollini, an extremely good church which I got to know a few months ago in Uruguay, two examples from Switzerland, two from France, and one from this country. All of them would never have been designed, if it had not been for Ronchamp. But only some of them are imitation, others are stimulus, and stimulus operates of course on a higher level than imitation. I take as an example of stimulus the group of the Houses of Parliament of Brasilia, with the office building in the middle and the Senate on the left, with its saucer dome, and the House of Representatives on the right with what I suppose I must call in this case a 'dome saucer' (figure 48). The contrast of these two elementary geometrical shapes seems to me reflected in Leonard Manasseh's Rutherford School with the pyramid and the inverted pyramid on the roof (figure 49).[31] And need I



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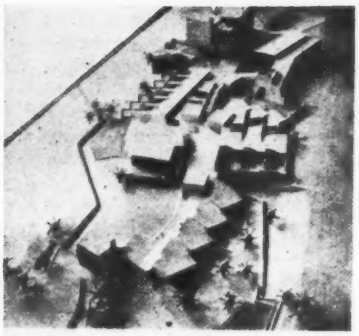

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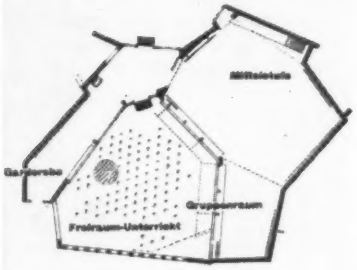

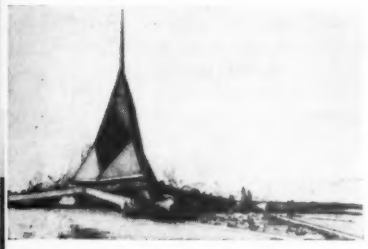

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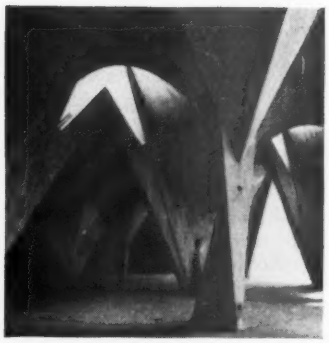

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remind you of what goes on on the top of the Unité at Marseilles and the tremendous progeny of these shapes on the tops of more recent buildings, or of the chequerboard story which, curiously enough, starts with Lutyens but is, I am sure, afterwards independent of him. Lutyens did the flats in Vincent Street, Westminster, with their odd chequerboard pattern over the whole façades in 1928. Then the motif was freshly taken up before the war in the Rosebery Avenue flats by Lubetkin and Tecton and from there became an international fashion. It can be done by means of a pattern to conceal regular fenestration, as for instance in the gilt-edged windows in Grosvenor Square, or by means of the fenestration itself being the pattern.

But the fundamental matter to explain the return of historicism remains the fact that a change of architectural style took place from about 1938 or so. It appeared at first innocuous enough: the neo-Accommodating of Scandinavian housing, and the Dutch Beton-Rococo in the work of Oud and others just before the war. But it suddenly gathered tremendous vigour, when young Oscar Niemeyer got going in Brazil in 1942–43.[32] His are the earliest buildings which are emphatically no longer of the so-called International Style, and they are buildings that have force, that have power, that have a great deal of originality, but they are, emphatically, anti-rational.

Why did this revolt happen? It is very easy to say: boredom; yet it is not untrue. It is equally easy to quote Wordsworth's splendid remark about 'the degrading thirst after outrageous stimulation'; yet that would not be untrue either. What is with us now has been called 'neo-sculptural', 'neo-plastic', 'neo-formalist', 'neo-expressionist'.[33] What all these terms have in common is, to repeat it, that they express a revolt against rationalism.

The leaders are a strange, impressive, if disjointed, group. To pick out a few, there are first those – and this is something I have not said yet – who belong to the new post-modern anti-rationalism, because they belonged to anti-rationalism before, that is, those who lived long enough to bridge, in their own work, that particular style which was created in 1900–10 and spread in the '20s and '30s. A very good example is Scharoun, the German architect, who, building things like figure 50,[34] when most of his friends had turned into the International Modern of the '30s, kept his Expressionism alive, and whose most recent work illustrated, a School in Lünen in Westphalia (figure 51) fits in perfectly with the neo-Expressionists.[35] So he is not a neo-Expres-

sionism in this case; it is the old Expressionism which lasted.

The same is true of Frank Lloyd Wright. He belonged to the International Moderns really in very few of his buildings, and the Expressionism of his design for the Chapel of the University of Oklahoma, done in 1958 (figure 52)[36] is, to my mind, certainly the direct continuation of such designs of his as the Tahoe Cabin of 1923.[37]

That is one type of case. Le Corbusier's is the opposite, the complete *volte face*, not presumably in his character but in what we see in his buildings. His turn, as far as I can trace it, began with the Maisons Jaoul and culminated at Ronchamp on the one hand and Chandigarh on the other. Now what I would say of this late Corbusier style, is that it is ideal for the emotions of a pilgrimage chapel, but when it comes to an administrative building, such as the Chandigarh Secretariat, then I would speak of 'outrageous stimulation'.[38]

Finally, there is the problem of Nervi. Nervi, of course, is one of the great creators of new forms; forms initially probably stimulated by Maillart and perhaps by Max Berg's Jahrhunderthalle. But Nervi's new forms are rationally controlled, not arbitrary. Now the question is, whether my figure 53, Felix Candela's church of the Wonder-working Virgin, belongs to Nervi or to neo-Gaudí and neo-Expressionalism. It is not for me to decide how far this is a design developed in that unison of structure and forms which is Nervi's secret. I can afford in conclusion to turn historian once more. The similarity between Candela's church, the Chapel of the Colonia Güell by Gaudí, of about 1905 (figure 54), and the famous Strahlenkirche – i.e. 'radiating' or 'radiant' church – which Otto Bartning designed and made a model of in 1922 (figure 55)[39] is, I think, striking. Whether that implies a criticism of Candela is not my business tonight, as it is altogether not my business to criticise the new anti-rationalism of the 1950s. As a matter of fact, I have done my criticising of the 1950s in the new last chapter of the Jubilee Edition of my *European Architecture*, and I think that the arguments I have used there stand. Social and scientific conditions have not changed since the '30s, but a revolt was bound to come against the formal rigidity and the uniformity of the '30s. However, it is not odd and strange exterior effects which are the answer; the answer lies in planning, in siting, in landscaping, and so on. The individual building must remain rational. If you keep your buildings square, you are not therefore necessarily a square.

But once again, it is not for such aphorisms that I am here tonight. All I have tried to do is to appoint myself, for one particular aspect of the great change, as a one-man fact-finding commission, and I hope, as a fact-finding commission, I have succeeded in giving satisfaction to some of you.

VOTE OF THANKS

Sir John Summerson, CBE, FSA [*A*]: It is not easy to say anything coherent after the panorama of contemporary chaos we have just witnessed, though I think the chaos was rather 'cooked up'. I do not think things are quite as untidy as they seem; on the other hand, of course, architecture at any given period, as any historian knows, is atrociously untidy. You can always find pretty well exactly what you are looking for!

Underneath all this, there are some problems, certainly. The whole psychological climate of architecture has changed since the '30s. The Modern Movement as we knew it then drew its energy from a sense of conflict, a sense of being pure, in a world of corruption and crime ('ornament equals crime' – Loos). Now that all architecture is getting to be pure, or at any rate to look pure, it is not possible to recapture the sense of thrust and purpose which belonged to the earlier period. But why try? To try to recapture the past leads to art-worry, and art-worry is the bugbear and the gorgon's head of modern times.

In the architectural context, I would define art-worry as trying to think what architecture should be without actually designing a building. Personally, I find I cannot write about modern architecture any longer because I cannot design. On the one hand, buildings which one recognises as obviously incompetent are not worth writing about; on the other, buildings of serious intent can only be properly criticised by designing another building. Don't think that I am decrying good descriptive and polemical journalism, which is both entertaining and important: I am saying that criticism of a serious kind has become impossibly difficult now that the critic cannot take sides. There are no sides to take.

I find it hard to see why there should not be all these quaint eccentric departures which Professor Pevsner mentioned. Thirty years ago, it was wrong to build a stone-faced building with classical or Gothic ornaments. It showed a lack of faith in one's generation, a lack of appreciation of modern resources, etc., etc. One would be blackballed from the Mars Group. Is it wrong now? Is it wrong for Mr Raymond Erith to do *opera rustica* in Queen's Lane, Oxford? Is it wrong for some young man who has read Reyner Banham to say to himself 'By God, I'm a Futurist' and build something looking like a 1914 dynamo? Is it wrong for an architect to be so intoxicated by Gaudí that he goes to his drawing board swirling like a dervish? It may be silly, but it is not wrong and I do not think it is always silly. If I may venture a prophesy, I do not think that architectural style is going to be a serious issue again for a very long time. The serious issues will be, I suppose, on the technological level and the administrative and legislative levels. The bulk of architectural output will soon be no more a question of art than a refrigerator is a question of art (and, of course, no less). Meanwhile, there is art-worry. But art-worry will be localised and eventually disappear. Have we not already an Institute for Constant Art-worry (ICA for short), whose therapeutic value may prove enormous?

Do not think I am too optimistic. There are plenty of problems ahead, but the problems Professor Pevsner has put to us tonight, while curious and amusing, are not problems about which we need worry very much; and let me add that, in this matter, I hold Professor Pevsner and even the *Architectural Review*, absolutely guiltless.

I have great pleasure in proposing the vote of thanks to Professor Pevsner.

Dr Reyner Banham: It gives me curious pleasure to come up to the dock or witness box in the wake of two such eminent men. I am a 'Pevsnerian' by 15 years' constant indoctrination and a 'Summersonian' by ten years' admiration. I do not think, however, I am here either as a 'Pevsnerian' or a 'Summersonian': I am here because I have written about the period which produced the works imitated by the neo-Historians and possibly as a representative of my generation, on whose behalf, I propose first of all to produce three quotations, none of which have yet appeared in print: doubtless they will.

The first shows that some neo-historians are serious and take pride in their accuracy: at the last Triennale, two well-known Milanese architectural wits of the middle generation are looking at that lamp of Gae Aulenti's which Dr Pevsner showed us; their conversation went something like this:

> Very good. 1916?
> Si.
> Guigno?
> No, October – she tells me.

The second shows, on the contrary, a more sporting attitude on the part of some British neo-historians. I had been shown over some new flats designed by one of them, and as we got into his car – it was an Anglia in those days, he affects something more sporting now – and hurtled away he threw me the challenge.

> Come on now, Mr Historian, tell me who you think are my influences?

The third comes from a member of an older generation, one who lived through the period of architecture that the modern-movement-revivalists love to revive. I had been trying to borrow some papers of the period from him for publication, and he refused me in the following words:

> No. I won't let you publish them, by God. What will happen when the Smithsons get their hands on Garkau?

This attitude of the older generation is one of the reasons for the present history-worry about historicism, that the sacred sites of the modern movement are being trampled by the young and enthusiastic without quite a due respect for the nuances around the original thing. Quite clearly, as we have learnt from Dr Joedicke's article on 'Haering at Garkau', the Garkau form buildings had nothing to do with our new attitude of mind and are not even remotely comparable, and there is genuine

Left to right: Dr Reyner Banham, Professor Nikolaus Pevsner and Sir John Summerson

alarm that these forms should be taken over by a generation which does not appreciate what was going on at the time and re-exploited in a different context to mean something different. Quite obviously, these particular wooden and steeply pitched roof shapes are going to mean something different nowadays and the golden memories of an older generation are at stake.

This brings me to another problem. Historicism is a sign of revolt, yes, I would certainly agree with Professor Pevsner and Sir John Summerson about that, but what is it a revolt against? From speaking to some of the more 'revolting' of my generation, it is clearly a revolt against – not the rigidity and excessive order of the architecture of the '30s – but is, I think, a revolt against the accommodating, neo-accommodating architecture of the immediately post-war phase. The generation then at school, looked at what was being done in the way of post-war rebuilding, looked in their *Architectural Reviews*, and saw long and – to them – embarrassing articles in praise of the 'New Empiricism' of the Baltic North and thought 'My God, this is dreadful stuff, it is so pretty and feeble' and opened a volume of Le Corbusier's *Oeuvre Complète* and said 'This stuff is so much better. This has guts.'

I think a recent experience of mine will go some way to confirm this. The responsibility-point which was raised by Professor Pevsner must be considered, because one conspicuous piece of neo-historicism, I realise, I must be in some way responsible for, however remotely. It is the dressing table by Dorothy Goble which appeared under the general rubric of neo-de Stijl in Professor Pevsner's classification. It was taken up, and made much of, by the ladies' pages of the Sunday press and by the ladies' pages of the house-organ of HM Fashion House, the Council of Industrial Design, and I was very gravely disturbed because I felt my responsibility – Mrs Goble was a student of mine and came to my history lectures. I could see exactly what slides must have influenced the work and was extremely worried and much exercised in mind, and said so on at least two occasions in print. It seemed to me I had personally contributed to exactly the kind of thing to which I am constitutionally opposed.

Nevertheless, reflecting on the immediate post-war situation which was brought back to my mind by Professor Pevsner's slides of neo-accommodating architecture tonight, I began to see possibly what had happened. What will happen with students when what they see in their history lectures is stronger and tougher stuff than they get taught in their studio instruction? What happens when the practising masters of the day produce only near-beer, and the slides that are shown in the history lectures are 80° proof? I suppose you can lock the cupboard and say 'You must not have any more history, it is not good for you', or you can add water until the stuff is indistinguishable from anything they get elsewhere. But the responsibility is still there. It lies not, I think, with the historian but with the practising architect or designer who is also a teacher: he must provide stronger leadership than the historian can. On which slightly *combatterre* note, in defence of my profession, I have great pleasure in seconding the vote of thanks to Professor Pevsner.

Dr Helen Rosenau: I speak with great trepidation, extremely upset at the forms we have seen, and very convinced that the historian's job can be to give inspiration of all sorts and kinds to the practising architect, although I am sure Professor Pevsner would agree with me that this is not his primary job. Today I saw a plan of the circular Ariel Hotel, with its very stark and simple elevation. As some of you may know, through me speaks the spirit of the late 18th century, and I was very struck by the fact that the Ariel Hotel could almost be designed by Boullée, although not quite. I am wondering whether the works we have seen, important as they are, do not belong to a passing phase: and whether historicism, which very often operates in the manner of going further and further back in time may not bring about a reaction to this wish for originality. (I personally feel that it often starts like Professor Pevsner said when he talked of old people bridging the gap from the older generation to the younger.) One may then discover the richness of an older tradition which, I need not say, in fact belongs to the 18th century, and which I think could be very well adapted to modern needs. Because those people started with an idea: they were talking of 'architecture parlante' – architecture which would speak for itself. I am wondering what Professor Pevsner would think of that?

The other question I would like to ask is this: it is, of course, important to take things in isolation but, at the same time, is not the phenomenon we have seen, in fact, paralleled by the 'angry young men' who strongly react to their environment and somehow feel that they have got to be robust and unconventional? Are we not here confronted with a far wider phenomenon than one which is only architectural and which, I think, is cultural in a much more general sense?

The President: I hope we have not got to the stage when Pevsner speaks only to Banham and Banham speaks only to God!

Mr D. H. McMorran [*F*]: It was fairly clear that this evening would be a historian's night out; but in a gathering which I assume consists largely of architects, it seems a pity if an architect were not to take part in the discussion.

I happen at the moment to be suffering from an extreme form of art-worry, and I cannot say what a great inspiration and encouragement this evening has been to me. Far be it from me to enter into any of the finer points of architectural history; I would like, rather, to make a point of a purely technical kind, suggesting a basic reason for the shocking uncertainty of taste which we have been shown. I have been trying to write about it, but I have decided that I am quite incompetent to do it. I might try in my retirement; at present, it is impossible.

This is the point I would like to put to Professor Pevsner. Until about 100 years ago, all forms of architecture were disciplined or controlled by the facts of construction, and the facts of construction were that everything was in compression. (I know, to be punctilious, I should admit that timber was used and was sometimes in tension.) Out of that discipline came the various architectural forms we all know.

The introduction of steel altered that situation. Steel introduced the element of tension, and it was used originally in beautiful engineering forms such as those of a suspension bridge, and all was well, because the steel that was in tension could be seen; the tensile forms were clearly apprehended and contrasted beautifully with the compressive forms.

But as steel came to be used more and more in ordinary building, you had it used both in compression and tension. You had to conceal it, because it was not capable of resisting the weather, or fire; and you had to protect it. So that, from that time, you had got steel hidden in the building doing work of all kinds, both tensile and compressive; and the effect on the mind of the architect was chaotic. He was left to do entirely what the spirit moved him to do. There was no control and no discipline. That is, I suggest, the cause of the chaos Professor Pevsner has described. I do not see a way out, but I would like to make a suggestion which may be acceptable.

In this country, by law and for the weather, we have to protect steel by some sort of covering. I suggest that we ought to give thought to this point; that what matters is what is seen. We protect steel with concrete, and then we protect the concrete with stone because concrete weathers badly in this country, and as soon as we introduce these proved materials, such as stone and brick, then we ought to consider whether what is seen ought not to master the situation, and that what is hidden behind should be thought of only as a means to an end.

I would remind you that, in the 18th century, where we use steel, they used wood. They did not feel the necessity to expose the wood or express it; they used it as a means to an end, and the appearance of their buildings was controlled purely by an aesthetic which had been founded by tradition on the compressive capacities of the materials that were visible. The dome of St Paul's is a framed structure, but the frame is concealed and we accept it. May I leave with Professor Pevsner those thoughts and add my warm thanks for his admirable talk.

Mr W. A. Allen [*A*]: I was much struck by Dr Banham's last comment. I thought he was putting his finger very accurately on the point the first speaker in the discussion later picked out: what is the challenge which architects are being asked to face today in design?

Dr Banham suggests they find that what they are seeing in their history lectures has a tougher character than the kind of ideas that are challenging them in school at the moment. Probably most good designers – and I think we have a lot of good designers, potentially and actually, in the profession today – like a challenge. Obviously, the people of whom Professor Pevsner was speaking as the sources, 40, 50 and 60 years ago of some of the design ideas we are producing today, were facing tough challenges and it shows in their work. He spoke briefly of our lack of appreciation of the immense intellectual effort and effort of spirit which was involved in creating the forms and buildings which were produced in the early stages of the modern movement; but it seems to me that, in being drawn into historicism of various kinds today, students and practising architects are taking the easy way out. It is not challenging at all; it is simply showing that you know what is 'OK' at the moment. I think Dr Banham was right if he was hinting that this was not going to get anyone very far.

I am not a historian. My interest always is in looking forward to the next step. If I turn to history at all, I see it rather like a curve on a graph which by its shape may reveal the direction things are likely to take. I think that the place where we are failing today, and the place where the challenges really lie (if the schools will only face up to it), is in making buildings a great deal better than they have been in recent times. The people who faced the design problems of 40, 50 or 60 years ago, had very tough basic problems to deal with, and a good deal of detail was not very satisfactory. They could not solve all the problems simultaneously. One of the outstanding shortcomings was to be really sensitive to the needs of peoples' sensory systems. Much of the work is vigorous and tough, but it is insensitive to deep-seated human requirements built in to our sensory system – sensitivity to light and space and shape and colour, to acoustic environment, to sheer beauty, and refinements of various kinds.

This calls for a new level of approach in the schools, and I am not sure that they are capable of it at the present time. I do not think they are tackling the problems of knowledge which lie behind sensitivity and refinement of many kinds, and I think this is where the new challenges really lie.

Professor Robert H. Matthew [*F*]: As a teacher, I am bound to bow to what Allen has said about schools: I know their weaknesses too well at the present stage.

We are indebted to Professor Pevsner for showing us his kaleidoscope of some of the things that are happening today; but, as Sir John Summerson has pointed out, these are only some of the things. We have got Clasp. How does Clasp fit into this picture? The architect of the present day, in this country at any rate, has to work within his social context. He does not tend to do these strange things with their roots in the past; he does something else. I wonder if the kind of Clasp outlook – a whole group working within a social programme, is not a steady influence which may well persist throughout this time of very quick change? I would say that one of the tasks of schools at the present time is to put the young architect within that social context.

Mr J. Harris: May I say that I think the circle would be complete when the historian looks at history and finds that he suffers from the same form of historicism that he sees in architects and architecture.

The President: It seems to me that the discussion has come rather neatly round in a circle, where we are suggesting that the actual teaching of art history is a 'thirst after outrageous stimulation'. It is time that I closed the discussion and gave time to Professor Pevsner to answer some of these points. Before I do so, I would like

in the traditional way to put the vote of thanks, which has been proposed by Sir John Summerson and seconded by Dr Banham, to the meeting, for an extraordinarily enjoyable and interesting lecture.

Professor Pevsner: The trouble is I need no time. I find myself more baffled than ever. There is really nothing for me to say. We have heard – you have heard – I have heard, two statements under the mantle of votes of thanks which interest me enormously, and which I think are, as independent statements on the subject, of complementary value. We have then heard a defence of the 18th century, which does not seem to me connected with what I thought I was talking about. The only thing that I can try to add is this. What baffled me most is not so much the silence at question time of the young, but that I should have conveyed the impression of chaos – a kaleidoscope, as it was called. That is not at all what I intended; the situation does not look to me chaotic at all, unless you say that anything that is of a very wild expressionist kind is chaotic in itself. On the contrary, I tried to put across the fact that we are faced here with a new style of the mid-20th century, which is different from the style to which I belong, which I was several times tempted to criticise, and on one particular aspect of which, that is on the existence of historicism today, I concentrated. To me it is a fact that Pampulha and Ronchamp and the historicist neo-Expressionists belong together quite organically, whether I like it or not. So that surely is not chaos.

Therefore my only comfort *vis-à-vis* of these misunderstandings can be that perhaps, owing to lack of time, my remarks to you have been so much under compression that I have not succeeded in creating the necessary tension in the audience.

Notes

1. The most notable is of course Robert Willis, the greatest English historian of architecture. He was Professor of Natural and Experimental Philosophy in the University of Cambridge, and died in 1875.
2. By Wejke and Oden, ill. G. E. Kidder Smith: *Sweden Builds* (Architectural Press), p. 67.
3. Ill. W. Müller-Wulckow: *Wohnbauten und Siedlungen* (Blauen Bücher), 1928, p. 61.
4. *Architectural Review*, CXXV, 1959, pp. 231, etc. and CXXVI, 1959, pp. 341, etc.; *The Listener*, 18 August 1960.
5. By Vittorio Gregotti.
6. By Gae Aulenti.
7. Ill. *Casabella*, no. 222, 1957–58.
8. Ill. *Architectural Design*, 1959, p. 122.
9. Ill. *L'Architettura*, IV, 1958–59, p. 304.
10. CXXVI, 1959, p. 320.
11. Ill. *Wasmuths Monatshefte*, IX, 1924–25, p. 147.
12. On Finsterlin *Frühlicht*, II, 1921–22, p. 36, and recently G. Lindahl in *Figura*, NS, I, pp. 226, etc. (Acta Universitatis Upsaliensis) and H. R. in *Werk und Zeit*, IX, November 1960, p. 2. Also, still more recently U. Conrads and H. G. Sperlich: *Phantastische Architektur*, 1960.
13. No. 226, July 1959.
14. Ill. *Architectural Review*, CXXVII, 1960, p. 195.
15. Ill. R. Mallet Stevens: *Grandes Constructions d'aujourd'hui*, c. 1928, p. 10.
16. Ill. *Zodiac*, IV, 78.
17. Ill. *L'Architettura*, IV, 1958–59, p. 300.
18. Ill. *Wasm. Monatsh.*, X, 1926, p. 164.
19. Ill. *Casabella*, no. 215, 1957–58, p. 62.
20. By H. I. de Haes. I.. *Wasm. Monatsh.*, VIII, 1923–24, p. 96.
21. Ill. *Casabella*, no. 219, 1957–58, p. 62.
22. Ill. *Casabella*, no. 223, 1958–59.
23. Ill. *Architectural Design*, 1959, p. 498.
24. Ill. W. Müller-Wulckow: *Bauten der Arbeit* (Blaue Bücher), 1926, p. 114.
25. Ill. Philip C. Johnson: *Mies van der Rohe* (Museum of Modern Art), 1947, p. 37.
26. Ill. *Architectural Design*, 1960, p. 455.
27. Ill. *Neue Holländische Baukunst*, Bremen, no year, p. 58.
28. Alan Fern in *Typographica*, XIV, 1959.
29. See *L'Architettura*, V, 1959–60, p. 364.
30. Madonna dei Poveri, ill. *L'Architettura*, III, 1957–58, p. 454; church at Atlantida by E. Dieste to be illustrated in *Architectural Review*; Agno Airport near Lugano by Otto Glaus, ill. *L'Architettura*, V, 1959–60, p. 461; design for St Thomas, Basle, by O. H. Senn, ill. *Architektur-Wettbewerbe*, XXVII, Churches Today, October 1959; new block for Marseilles University by J. Berthelet, ill. *Architects' Journal*, 12 January 1961, p. 70; Dominican Friary at Lille by P. Pinsard and Neil Hutchison, ill. *Architectural Design*, 1959, p. 408; St Mark Broomhall, near Sheffield, by G. G. Pace, ill. *Architectural Review*, CXXVII, 1960, p. 22.
31. Whether this particular stimulus can have worked, historically speaking, I do not know. Meanwhile Dr Banham has reminded me of the inverted pyramid of Niemeyer's new museum for Caracas which was designed in 1955 (ill. J. Joedicke: *A History of Modern Architecture*, London, 1959, p. 221). So there may be imitation after all.
32. And the Museum of Modern Art published its *Brazil Builds* (1943) for the world to see these new things.
33. Philip Johnson in a talk to the Architectural Association last December called it 'functional eclecticism', but also, so the *Architects' Journal* (8 December 1960) reports 'a really nice juicy chaos'.
34. House for an exhibition at Breslau, 1929, ill. M. Casteels: *The New Style*, 1931, p. 44.
35. Ill. *Architectural Review*, CXXVIII, 1960, p. 391.
36. Ill. *L'Architettura*, V, 1959–60, p. 473.
37. Ill. already in 1926, i.e. still in full Expressionism, in H. de Fries: *Frank Lloyd Wright*, Berlin, 1926, p. 44.
38. Niemeyer has not committed the same error of judgement. Senate and House of Representatives are neo-Expressionist, the buildings for the ministries are neutral. The President's Palace and the Law Courts have beautifully shaped and detailed neo-sculptural screens, the ministries have not.
39. Ill, e.g. G. A. Platz: *Die Baukunst der neuesten Zeit.*, 2nd ed. 1930, p. 434. Also *Handbuch moderner Architektur*, 1957, p. 772.

Another view of the Sanmichele Exhibition. On the left a full-size plaster cast of the staircase of the Palazzo Bevilacqua, Verona

Revision of the RIBA Bye-laws

A Special General Meeting of the RIBA will be held at 6 p.m. on 25 April to consider the Council's recommendations for the revision of Bye-laws

The attention of members is called to the notice of the Special General Meeting to be held on 25 April 1961 which is printed on page 221 and to the revised draft Bye-laws which are set out against the existing Bye-laws for easy comparison in the pamphlet issued with this number of the JOURNAL.

The work of the Constitutional Committee under the Chairmanship of Mr A. W. Cleeve Barr [*F*] will be familiar to members through the reports which were published in the JOURNAL; the interim report having been published in the JOURNAL of December 1958 and the Final Report in the JOURNAL of July 1960.

It will be recalled that the principal purpose of the review was to reconstitute the RIBA Council in such a way as to insure that it was a democratically elected body representative of the Institute's whole membership. As indicated in the Final Report of the Committee, the framework finally devised was a Council of which half the members were to be elected by the postal ballot of the whole general body both at home and overseas; this half being known as the Nationally Elected Members: and half being elected by all RIBA members resident in a series of regional constituencies in the United Kingdom; this half to be known as the Regionally Elected Members.

In addition, the representatives nominated by the five senior Commonwealth Allied Societies will remain on the Council with the right to appoint deputies until there has been time for the completion of the examination of the constitutional position in the Commonwealth which was initiated by the preparatory Commonwealth Conference held in September 1960.

The putting into effect of the new Council constitution involves virtually the complete re-writing of Bye-laws 28 to 36 and further comment by way of explanation of the reasons for the alterations is superfluous.

It was thought important to preserve some continuity on the Council by making the change from the present constitution to the new one come into effect over a transitional period of three years. As the changes are extensive the transition will be complex and it seemed best to introduce two entirely new Bye-laws, 77 and 78, which would legislate for the transition and then become obsolete rather than complicate the Bye-laws dealing with the Council's constitution and election by including in them extensive temporary provisions.

The Constitutional Committee were also charged with reviewing all the other Bye-laws to bring them more into line with modern conditions. Apart from correcting a few minor matters of drafting and re-arranging some Bye-laws into a more logical order, the following are the main revisions proposed and the reasons for them:

In Bye-law 3, the special provision for admission of former members of the Society of Architects to the Licentiateship is now omitted since there is none left to take advantage of it. Also provision is now made for nomination papers to be signed by three members of whom only one need be a Fellow.

Bye-laws 10 and 11 are now revised to provide a more simple and less costly procedure for scrutiny of applications for election. Since admission to membership is now restricted to those who have passed the qualifying examinations, it is considered that the publication of applications in the JOURNAL which is received by every member is sufficient notice.

Bye-law 14 is amended because the traditional procedure for the admission of new members at General Meetings appears to have lost some of its dignity and much of its significance. The amended Bye-law provides for new members to be presented personally to the President at a special less formal reception held for the purpose.

There have been some anomalies in connection with Bye-law 15 arising principally from lack of clarity in the definition of what should constitute retirement. It seemed right that so long as anyone was actually earning any income from architectural work, he should pay his full obligation as a member of the Institute.

Bye-law 21 had allowed a number of loopholes in the procedure for dealing with members in arrears to the extent that it was possible to remain permanently owing two years' subscription. The revision is designed to reduce the time factor while still leaving latitude for cases of hardship.

There was some doubt as to whether the Code of Professional Conduct had any sanction. The revision of Bye-law 23 is designed to make this point clear.

The Council had already been given executive powers in regard to administrative arrangements generally, and the amendments to Bye-laws 26 and 27 are no more than to recognise a position which exists.

Under modern conditions, it may well be to the advantage of members if, on occasions, meetings of the Council and General Meetings, Conferences, etc., are held elsewhere than at Portland Place, and it may also be of advantage if the Council have at least the power to vary dates of the meetings if circumstances warrant it. Amendments have accordingly been made to Bye-laws 37, 54, 58, 61 and 64 to give this latitude.

The Annual Report has not hitherto been sent to the substantial number of members overseas. Bye-law 42 is amended to permit of this.

The limit in value of a cheque which may be signed by the Secretary alone has not been raised for very many years and now bears no relation either to the value of commodities or to the volume of business transacted by the Institute. The amendment to Bye-law 45 is to reduce the burden on busy practising architects who are Honorary Officers, but there will be no relaxation in the internal procedure for the scrutiny and audit of accounts.

The amendment to Bye-law 46 is to cut out the present duplication in the Council's records. The common seal may be affixed only on the Council's authority and that authority is recorded in the minutes.

The amendment to Bye-law 52 is related to that made to Bye-law 42 and is to adjust the time-table for the production of the Annual Report to fit in with the new Council election procedure.

Bye-laws 59 and 60 have been substantially amended to co-ordinate and rationalise the powers of the general body of members to monitor decisions of the Council. In considering these amendments, it should be noted that the power of a general meeting to pass a resolution which is mandatory on the Council arises from the Charter of 1887, Section VII (32), and cannot be rendered void by the Bye-laws. Nevertheless, under modern conditions, with a world wide membership, it seemed dangerous to allow the whole Institute to be committed by a snap resolution taken at a General Meeting attended by perhaps a handful of members.

Bye-law 59 has accordingly been revised so that, at the first blow, such a meeting can do no more than require the

Council to examine and report back. On reporting back to a subsequent General Meeting, the Council would still be required to defer to the power vested in the meeting by the Charter of 1887. The Charter requires the Bye-laws to specify the majority required for any such resolution to have the force of a resolution of the Royal Institute. The Bye-laws have not hitherto laid down the necessary majority and Bye-law 56 has now been amended to make this provision.

There was a body of opinion that the proper procedure for monitoring any decision of the Council should be by the process of referendum. With the size of the Institute, this process is costly and not lightly to be undertaken.

Bye-law 60 makes provision both for the Council to take a referendum and for one to be requisitioned by private members, but it tries to insure that one shall not be taken unless the question at issue obviously commands a substantial measure of interest.

Bye-law 69 has been re-worded so as to define more clearly the qualifications for admission as an Allied Society in the light of the developing constitutional situation in the Commonwealth. In particular the term 'British subject' now lacks definition.

With the evolution of the organisation of Allied Societies especially overseas, the system of calculating and paying rebates has become too rigid and too complicated. The payment of grants related to the populations and needs of Allied Societies but not calculated in detail, will relieve Honorary Officers of Allied Societies of a large burden of routine office work. The proposed amendment to Bye-law 73 still safeguards the Institute's finances by retaining the upper limit of payments which may be made.

By general agreement, some modification and streamlining of the Allied Societies Conference is needed. It has been thought that a smaller body consisting of members with a more direct link to their parent bodies will act more effectively as a channel of communication between the Institute and Allied Societies, Branches and Chapters. Bye-law 74 has been amended accordingly.

Book Reviews

Studies in Landscape Design.

By G. A. Jellicoe. 9¼ in. 125 pp. + 60 plates. Oxford UP. 1960. £1 5*s*.

The author, a distinguished architect and town-planner, is a member of the Royal Fine Art Commission and a Past President and Trustee of the Institute of Landscape Architects. Some of the material of these studies, which are based on lectures recently given to diverse audiences, will be familiar to the older generation of his students who will follow with interest the development of Mr Jellicoe's ideas and his present objectives.

Publication is opportune, because (in Mr Jellicoe's words) 'The intense pressure upon our land to contain more objects than is comfortable and objects whose ideas are often in conflict with one another' is becoming obvious to all.

Mr Jellicoe's own method owes something to W. Robinson, author of the *English Flower Garden*; compare Robinson, for instance, in 'the breadth, air, forms and foreground, and values that interest painters, the atmosphere of Corot, skies of Diaz, water of Daubigny, and Nature's trees, landscape and atmosphere should teach us much', with what Mr Jellicoe has to say on pages 56, 57 and 94 of the present volume; and Robinson in 'Next to moving heaven the heaviest undertaking is that of moving earth', with what Mr Jellicoe says on page 64.

The Royal Horticultural Society preceded the Institute of Landscape Architects by some 95 years and the initiative has passed since Robinson's day from the unorganised gifted layman to the organised professional, and Mr Jellicoe shows by good modern examples, such as the section of the Cromwell Road extension immediately beyond Hammersmith, that landscape architects are active today both individually and in collaboration.

Mr Jellicoe has drawn on his own historic garden books and on Repton, as well as on present day books on landscape to illustrate his studies which, as already indicated, are concerned with the links between the vision of the painter, especially the Italian painter, and contemporary landscape design. He deals in a catholic manner both with historical and modern works; one would have liked more space given to Poussin, an important exhibition of whose works took place last summer in Paris.

The book is well indexed and furnished with photographic plates. It is cross-referenced, so that the same plate illustrates points in different studies.

CECIL J. SEARLE [*A*]

Pre-Contract Practice for Architects and Quantity Surveyors.

By the Aqua Group. 9¾ in. x + 73 pp. Crosby Lockwood. 1960. 12*s*. 6*d*. A supplement of Specification Notes is published separately at 3*s*. 9*d*.

During the last few years a great deal of work has been done by architects and quantity surveyors in an effort to improve their service to the contractor. The many articles, courses and conferences on this subject have shown that a sincere re-assessment has been made of normal practice and we can now begin to reap the benefits of this work in our offices and in professional education.

One of these contributions is from the Aqua Group and is entitled 'Pre-Contract Practice for Architects and Quantity Surveyors'. It contains a great deal of sensible ideas accumulated during the last few years and is well presented and indexed. The material is presented in an attractive way and is well worth reading along with the other material on this subject. It cannot avoid suffering from the difficulty of being up-to-date merely because progress in this field is these days very rapid. For example, the consideration of pre-contract procedure without the advice of an engineer, is apt to be incomplete, and this is only too apparent as the booklet starts by quoting the Simon Report on pre-contract procedure which is almost impossible to achieve without a clear working arrangement with engineering consultants. Perhaps the next product of this group might be called Pre-Contract Practice for Architects, Consulting Engineers and Quantity Surveyors.

One of the line drawings by Brian Bagnall illustrating *Pre-Contract Practice for Architects and Quantity Surveyors*

ALICK LOW [*F*]

Magnus on Housing Finance.

Edited by S. W. Magnus and Laurence Tovell. 9¾ in. xxvii + 448 pp. Charles Knight. £2 10*s*.

Many private clients are interested in the grants which are available towards the cost of building or converting and improving dwellings, and almost every practising architect knows something about those grants. But how many architects know which one of the many Acts of Parliament authorises a particular type of grant, or of the conditions which attach when a grant has been made, or what are the statutory requirements regarding the form of application? Even if an architect in fact knows all this, the chances are that he has no copy of the particular Act to hand, and may not know where to get a copy quickly. Here at last, however, is a compact book which contains the necessary extracts from all the relevant Acts, so that one can easily put one's finger on the authority for improvement grants, grants towards agricultural

housing, loans for the purchase of houses and so on. Not the least useful feature is the latter part of the book which contains all relevant Ministerial circulars, statutory regulations and copies of statutory forms. This seems to be the first time that this particular type of information has been assembled in one volume dealing only with those matters, and it must become an invaluable reference to all practising architects.

D. W.

The Kitchen.

By Joan E. Walley. 8¾ in. viii + 218 pp., illus. Constable. 1960. £1 10*s*.

Domestic Heating.

Edited by W. F. B. Shaw. 8¾ in. x + 178 pp., illus. Temple Press. 1960. £1 1*s*.

Both these books are directed primarily at the 'informed layman', although both deal with subjects of interest and use to the architect as well as to his client in the field of domestic building.

In presenting her lucid account of *The Kitchen*, Miss Walley gives an historical survey as well as covering in considerable detail materials used in kitchen equipment and the equipment itself, both large and small. However, the sections of the book which contain the most interesting and constructive ideas are those on motion study, kitchen planning and kitchen storage. Even in these enlightened times, architect-designed houses appear with kitchens in which the simplest labour-saving work sequence is impossible. This sequence – worktop/sink/worktop/cooker/worktop – is surely not a very ambitious formula to achieve and saves endless fatigue and irritation. Oddly enough, there is little really useful literature on kitchen planning and virtually none on the space problems which are arising with the introduction of more mechanised equipment. The detailed consideration of storage is seldom given the attention it deserves, either by the architect or the building owner or even by the latter's wife, whose province this should be. Sizing storage compartments for full use of space and easy access to each item, as Miss Walley recommends, is a principle which could be extended beyond kitchen requirements. However elementary this may sound, there are few buildings without shortcomings in this respect.

The study of *Domestic Heating* is dealt with as a series of chapters by specialist contributors. This method seems to result in more faults than virtues, as an adequate comparative survey dealing with costs of installation and merits of the different systems is lacking, in spite of the general chapters provided by the editor. Even though individual cases vary greatly, there is still enough available information to provide the basis, say, for a comparison of different capital costs of heating installation of a three-bedroom house of a given construction. The reader is faced instead with a large amount of descriptive material on solid fuel, gas, electric and oil appliances for individual room heating from contributors having more or less vested interests in their own type of fuel. Although some chapters, particularly that on Central Heating Systems, deal soundly with their subject, the overall result is disappointingly incomplete.

ELAINE DENBY [*A*]

English Art 1800–1870.

By T. S. R. Boase. Vol. X of the Oxford History of English Art, ed. by T. S. R. Boase. 9½ in. xxiv + 352 pp., 97 plates, 12 plans. Clarendon Press: Oxford University Press. 1959. £2 10*s*.

Volume X of the Oxford History of English Art surveys painting, sculpture, architecture, and decoration from the Napoleonic Wars to Gladstone's first ministry. One is apt to approach such a work with the feeling that capsule compendia are hard to write, hard to read, and hard to review. This one is fascinating to pore through at length; it is hard to do justice to in a short space, and it must have been a tremendous yet enjoyable task to write.

However some of it may overlap portions of more specialised surveys, it splendidly justifies itself by presenting the performers, the patrons, and the critics of the visual arts in their context of the history of this period of extraordinary changes. The fact that this book is able to draw upon researches in 19th-century architecture by Summerson, Hitchcock, Pevsner, and many others shows how the study of architectural history in this country has leaped ahead since the comparable section of G. M. Young's *Early Victorian England* was written in the 1930s.

The proportion of space allotted to various key figures is for the most part well-balanced, except perhaps in the case of Nash and Soane: eight pages for Nash to two for Soane seems almost overdoing the former's quantitative success (and comparative freedom from demolition and from Sir Herbert Baker) and it may be a serious omission not to mention the influence of Soane's teaching. In fact, one would be less likely to refer here for major figures who are treated elsewhere; but for a large array of minor figures it should be much consulted, as well as for its survey of the whole texture of the period in relation to the arts, from the private founding of the Old Water-Colour Society to the public launching of the Great Exhibition of 1851.

The book ends with the new art of photography and with London's first view of the Impressionists at Durand-Ruel's gallery in New Bond Street, and the beginning of a different world that was to end in 1914. In that period beyond this book, Mr Boase surprisingly says that English architecture was to count for little abroad. Let us hope that Volume XI in the series, *English Art from 1870*, will correct that view with full reference to Muthesius and other apostles of England in Germany, as well as to English influences on Continental Art Nouveau. No doubt the limits implied by 'English' in the title will not prohibit inclusion of the Glasgow School. The Sassenach taint does not prevent some happy description of art and other exercises in Edinburgh in the present volume.

The text, in spite of the amount of matter crammed into it, rides easily with a nice touch of ironic humour here and there. The footnotes are a mine of information in themselves, providing a considerable extension to the bibliographies of contemporary and later works at the end of the book. The plates are clear and well chosen.

The author, who is also editor of the series, brings a gift for learned and civilised synthesis to seven decades that were prolific and voluble and, as he proves to us, whatever the changes in taste, richly endowed with works of art.

PRISCILLA METCALF

Art and Architecture in Belgium 1600–1800.

By H. Gerson and E. H. ter Kuile. Pelican History of Art. 10¼ in. xix + 236 pp. + 160 plates. Penguin Books. 1960. £3 3*s*.

This volume must have set its editor some awkward problems. The geographical one he sensibly cuts through by applying the 19th century name Belgium to the Southern Netherlands. The temporal one, however, is a little more confusing: despite the title's date limits, architecture, though not art, has been taken back to the point of the earliest Renaissance influences. The Renaissance arrived early in the 16th century as ornament on Gothic structure. By about 1520 it was itself becoming the structure, however unorthodox, and the freedom with which the new influences were assimilated brought with it its own problems; reference to the sources could not, for instance, provide guidance for the handling of steep gables.

Though the country was torn by wars and subjected to foreign domination, the first half of the 17th century was the great period for Flemish Baroque, and the running was made largely by ecclesiastical, especially Jesuit, architecture. Baroque treatment was often decorative rather than spatial, and Gothic rib-vaulting and ground plan lingered in the churches throughout the 17th century. As to secular architecture, the Grande Place at Brussels shows how enduring were the native traditions.

The truth is that though the architecture of this period in Flanders is interesting enough in its regional presentation of Italian, and, in the later 18th century, French classical, forms, it did not produce any outstanding figures, a point perhaps made decisively enough by the fact that only 25 pages (in a separate section and by a separate author, Dr ter Kuile) are here devoted to it, in contrast to the Pelican History volumes on similar periods in France and Italy, where in each case architecture is treated chronologically with the other arts and occupies more than half the total text.

But it is in painting, of course, that the great achievements of the period lie, in Van Dyck, Jordaens, Brouwer, David Teniers, and above all in Rubens, of whose work Dr Gerson produces a most lucid and congenial study, embellished with over 50 plates.

D. E. D.

Building Roundabout

By Arthur Kenyon. 8¾ in. 133 pp. The Builder. 1960. 10*s*. 6*d*.

Those who followed the weekly articles on 'Everyday Things' in *The Builder* will be glad to see them collected in this, the magazine's first effort at book production. A dull cover and some misprints can be excused by the very readable contents.

The author is one of those rare men, a highly qualified and experienced practitioner who has the ability of reaching across the borders of professionalism to the man on the job. Brought up in the building industry, he knows why and how things are done on site and has a genuine

admiration for the tradesman. At a time when traditional crafts are declining it is well to be reminded of the little touches of workmanship and finish that used to be taken for granted but often now are regarded as an imposition, especially by big contractors, if required by the architect.

We are guided through protocol for the ceremonies and the courtesies of the industry. Tricks of the trade are exposed. Fast-vanishing techniques are revived by the author's enthusiasm. Alternately wise and whimsical, his observations tempered strongly with nostalgia, Mr Kenyon imparts much practical information and provides food for thought on the loss of dignity that has followed the passion for economies in building. Quietly he persuades us that it is human relations, the workman's pride and respect for good work and knowledgeability on the part of the architect that really count. One would expect his jobs to be happy, if lacking that superlative degree of efficiency that time-and-motion study men are expected to bring.

Some will detect reactionary undertones, but it is no bad thing to throw this modest architect's book in the scales against the overload of art criticism and managerial instruction with which the profession has lately been burdened by journalists and business experts.

EDWARD JAMILLY [*A*]

The Cathedrals of England.

By Harry Batsford and Charles Fry. 10th ed. by Bryan Little. 7¾ in. 224 pp. incl. pls. (98 figs.) and 26 text plans. Batsford. 1960. 18*s*.

The text of this work, first published in 1934, has been revised and is both historical and architectural; it is fairly up to date in its references to Liverpool (Roman Catholic) and Coventry. As compared with the earliest editions the misleading 224 pages, which include unnumbered plates, cannot be compared with the old 128 which did not; there are 98 plate illustrations as against 134, some now larger, some only half-page, but the 32 charming little sketches in the text have gone, as have also the endpaper map and diagrams. The new edition has thinner, tougher paper and is therefore a slimmer volume, of slightly smaller format, and the type is clearer and slightly larger. The glossary remains, as do the 26 plans, enlarged, but not included in the list of 'illustrations' (which now seems to mean photographic only). The captions now give dates and craftsmen.

As this follows a new edition (1956) of the same publishers' companion work, Harvey and Felton's *English Cathedrals*, it is opportune to compare them. Batsford and Fry, of course, describes the cathedrals individually, Harvey collectively; whereas the latter is specialist, the former is more popular in appeal. Batsford and Fry alone includes last-and-present-century examples, and a section – now slightly enlarged – on parish-church cathedrals, the most useful single feature. Of the plans mentioned Harvey has 14, and against its plate figures Harvey has 75 plus tail-pieces; he also has a new map. The caption details mentioned seem mostly not to have caught up with the latest Harvey.

Batsford and Fry's main divisions – greater cathedrals (i.e. presumably, monastic or collegiate), parish-church, and modern (i.e. 19th and 20th century) – are a little overlapping; St Paul's goes in the first series, but the Roman Catholic ones are dismissed in the introduction. Within the three categories the cathedrals are alphabetical.

The index is good, though a few modern architects' names are omitted. Few errors in the work have been spotted: 'Weightman' had only one n; in the captions of figures 18, 'choir' should read 'chapter-house', 28, 'Sir Giles' should be 'Sir George', and in 39 the words 'in part' should follow the date.

H. V. M. R.

The Buildings of England. Leicestershire and Rutland (BE 18), Buckinghamshire (BE 19).

By Nikolaus Pevsner. 7 in. Penguin Books. 1960. 10*s*. 6*d*.

Shell Guides. Suffolk. By Norman Scarfe; **Mid Wales.** By David Verey. 9⅛ in. Faber and Faber. 1960. 12*s*. 6*d*. each.

The Betjeman and Pevsner schools of guide writing may be seen as two distinct poles. They *are* distinct because on the one hand, Betjeman is concerned not only with architecture, but also with landscape, customs, and ways of life. Pevsner, on the other hand, has one prime commitment: to describe in scholarly architectural terms the buildings of England. Critics of his work have often unjustly ignored this *prima facie* obligation, but whatever comparison is made between the two types of guide writer, one dominant fact emerges: no one guide can meet all one's wishes. The warmth of Betjeman's introductions, passed on to his respective authors, brings one intimately into the presence of the *genius loci*. Although the work of his authors is often uneven, yet behind his compilations there is that glowing desire to get at the spirit of a place, and to persuade the traveller to go there willy nilly. One feels that Pevsner, because of his special commitments, presumes the traveller is already in the place, and is ready for his admirable, succinct and scholarly comments. He has the European vision and this is reflected everywhere in his guides; perhaps nowhere more so than in his descriptions of the cathedrals. This building type is the unifying core—more so than the country houses—of his perambulations. Perhaps one day the cathedral portions will be edited in one volume. It would be a remarkable work and Pevsner would be the super John Britton of his day.

Both his volumes under review follow the now standard pattern: introduction; alphabetically arranged descriptions; glossary of terms, perhaps the best small one yet available; and 64 pages of plates. Pevsner invites the spotting of gaps and mistakes. This is inevitable, for the perfect guide would be boring; would destroy the delight of personal discovery; and would prohibit the benefits to be obtained by criticism. The highlights of Buckinghamshire are undoubtedly Eton College, and there the analysis of Holford's fan vault; and Stowe, and there the perambulation of its landscape garden. Buckinghamshire is a Home County and suffers from a familiarity to anyone whose vortex is London. Yet Pevsner has managed to pull some good things out of his bag. Lord Nottingham's monument at Ravenstone is a splendid baroque gesture, and the 1552 Dormer monument at Wing is an unexpected breath of Franco-Italian air in a rustic village. Nothing could be more enchanting than the Gothic Hampden House. The documentation on this volume is, however, not what it should be, most notably in the domestic field. There are some peculiar, albeit well-known, omissions. Gibbs did the Cannons/Fawley chancel and the Mausoleum there also came from Cannons. Again, Gibbs did the early Georgian interiors at Hartwell. The Bridge at Eyethorpe is by Ware and was published by him as an exemplar. Perhaps the most important gap lies in the failure to record that Wren was working on the Stowe gardens in 1683, just when the 17th century house there was going up. He should be seen as at the head of a succession of great English architects concerned with the layout. There is also evidence from Temple's notebooks that he designed Westbury Manor.

Leicestershire and Rutland is undoubtedly the better volume because, as the counties have not been treated architecturally in the past, it makes a real contribution. Pevsner has rightly gone to town with Leicester, a city that has at last received a deserved attention. The biggest house is perhaps Belvoir Castle, where, however, there is no evidence that John Webb was responsible for the late Commonwealth rebuilding. A more likely candidate is Samuel Marsh, who adhered to the plan outline of the old castle. Rutland is also a pleasure. The crazy Norman chancel arch at Tickencote is well known. The Exton monuments are less known; and a revelation to the interested layman will be the *tour de force* of Burley House. It certainly needs investigation, although Finch rather than Lumley was responsible for this example of proto-Palladianism. The plan is based upon a published one by Palladio, and the elevations, clumsy although they are in their extent, could have been built by the Smith school 30 years later. All in all it is a surprising and very advanced house.

J. H.

Das Maurerbuch.

By A. Behringer and F. Rek. 9th edition. 11⅛ in. 424 pp., incl. 1,355 illus. Ravensburg: Otto Maier Verlag. DM. 46.

Although first published as recently as 1949, *Das Maurerbuch* is now in its ninth (expanded) edition, and 80,000 copies are in circulation. Roughly translatable as 'The Mason's Book', but more clumsily and accurately (although less literally) as 'The Building Craftsman's Compendium', it explains in straightforward and untechnical language every process in the construction of a building from reading the architect's drawings to the completion of the roof, finishes inside and out, etc. Materials and methods, both traditional and modern, are described and costs and quantities analysed. It may be invidious to pick out particular sections for praise, but the chapter on staircases appears to be outstandingly helpful. The volume contains nearly 1,400 illustrations of details, and is organised with the unflagging zeal and meticulous thoroughness which are so typical of German books of this kind.

J. C. P.

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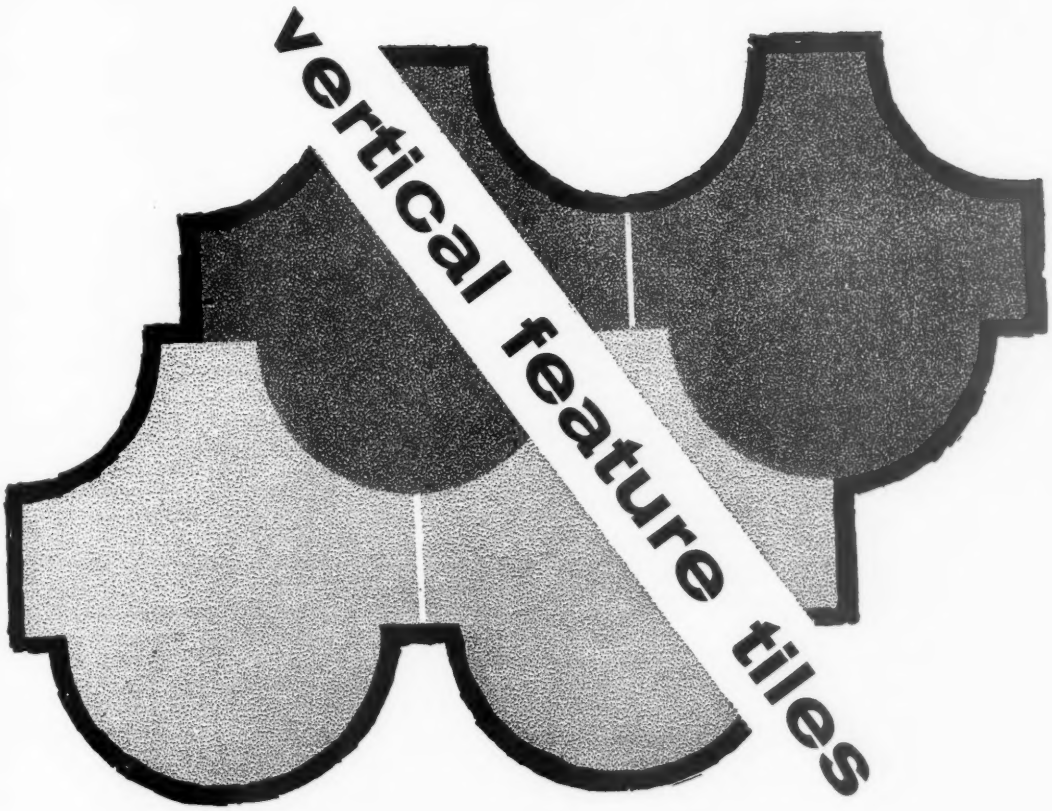

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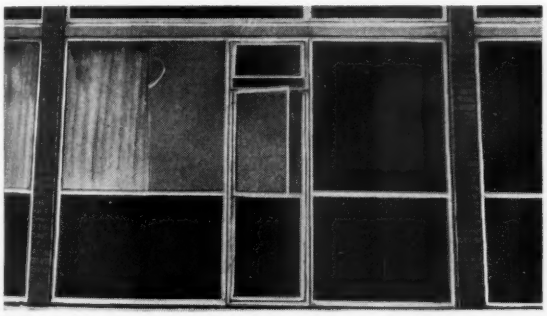
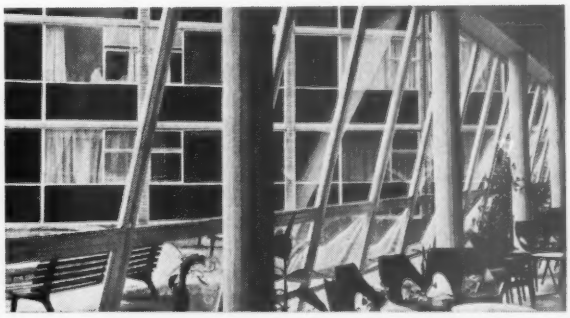


For bedrooms at ground level a stall door was specially designed to give direct access to a car park outside. The clean, simple lines of the general design are preserved by installing the opening window and ventilator light in the upper half of the door.



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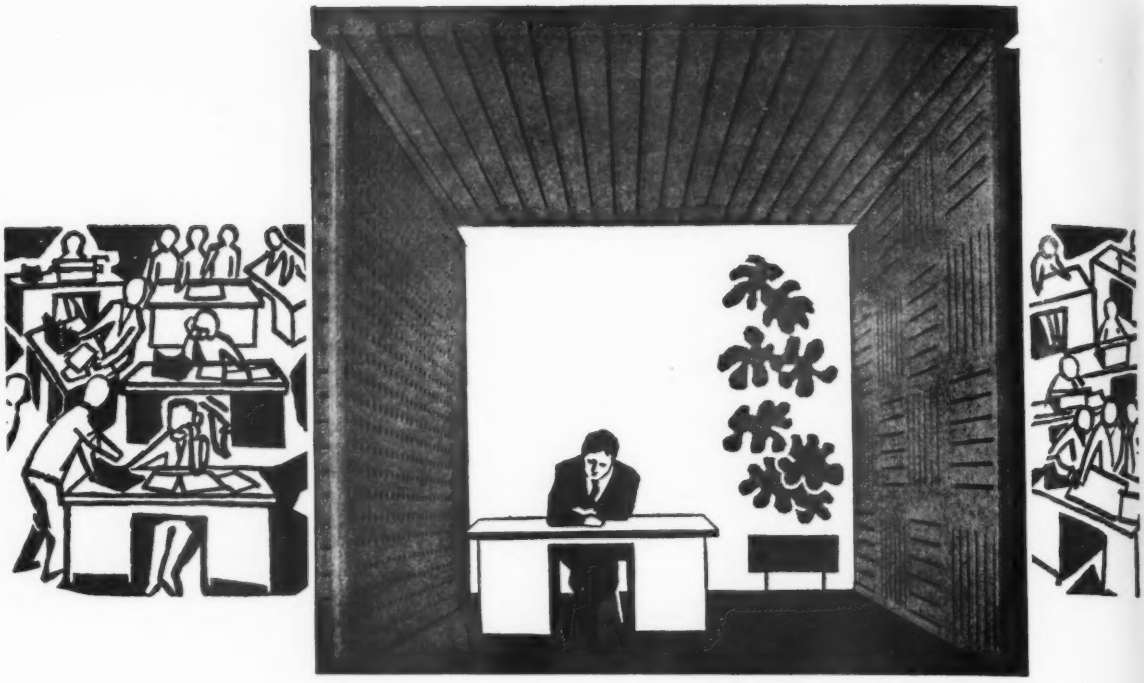

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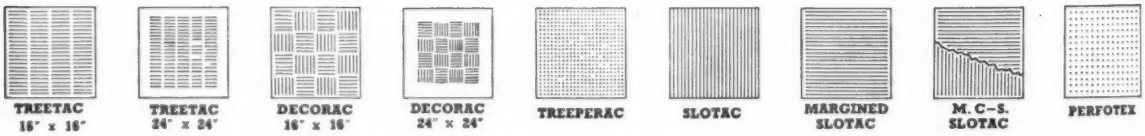

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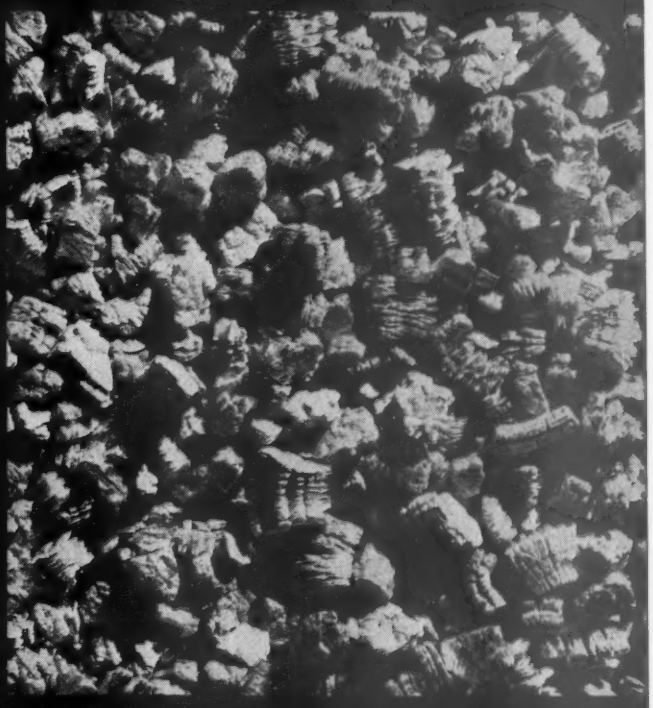

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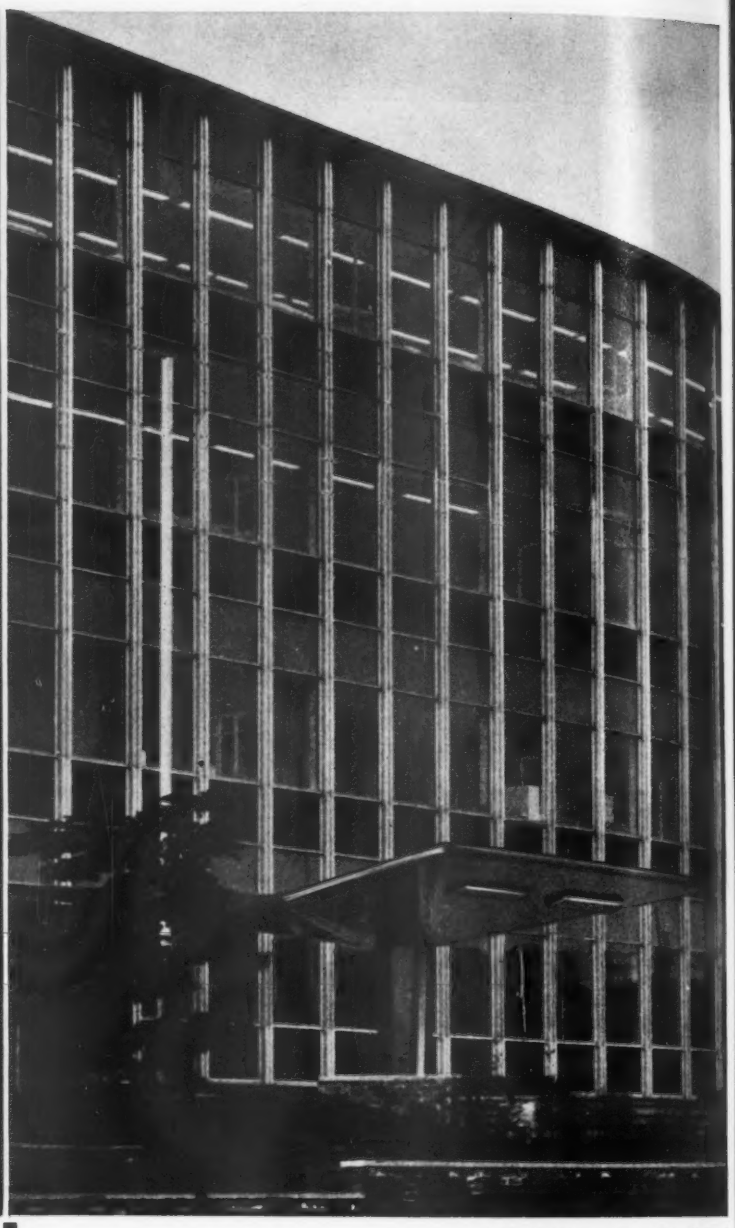

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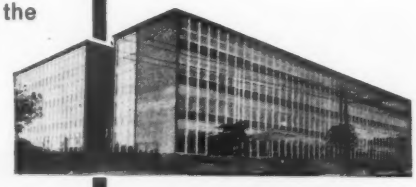

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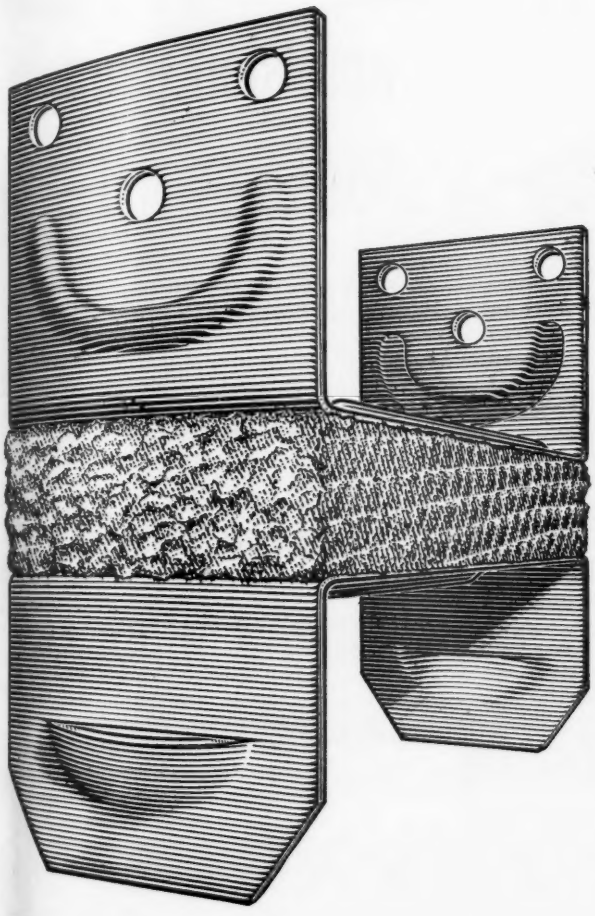

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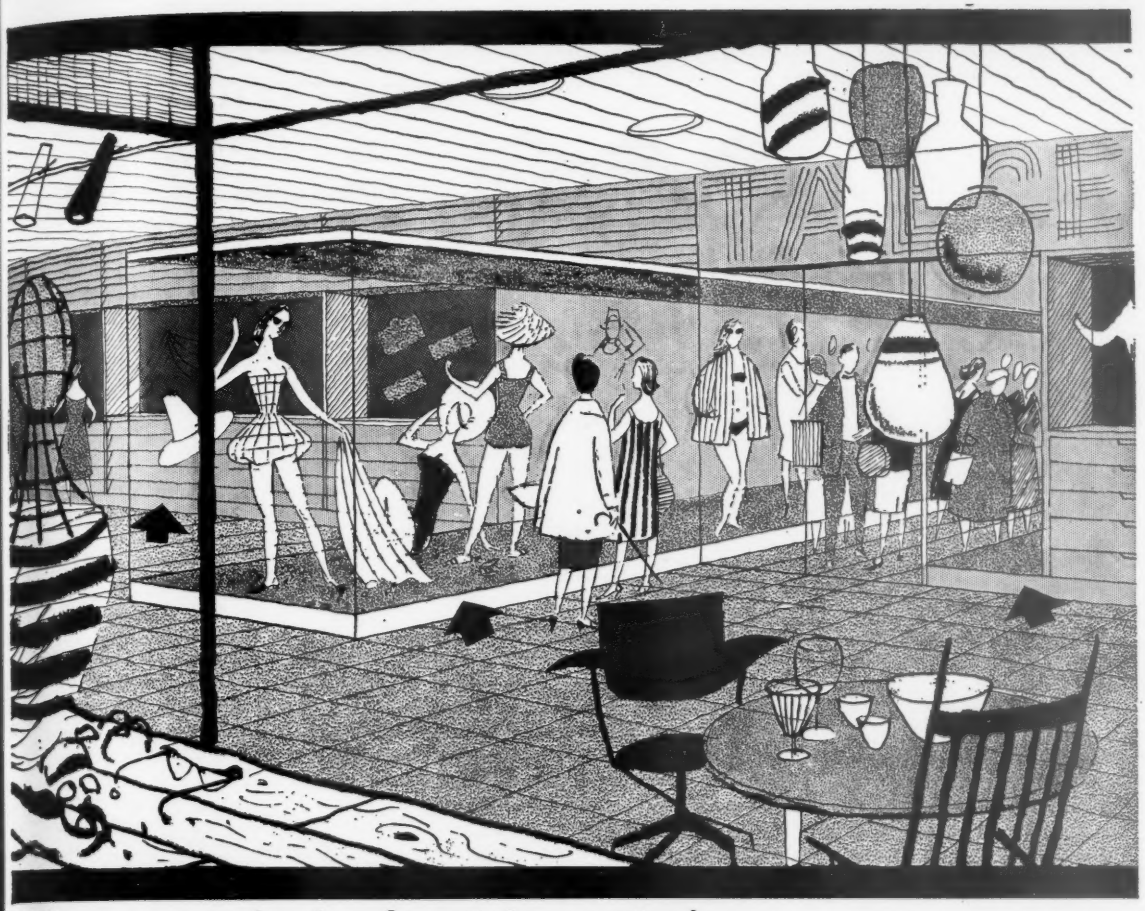

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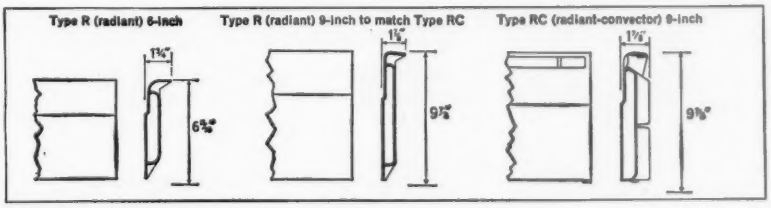

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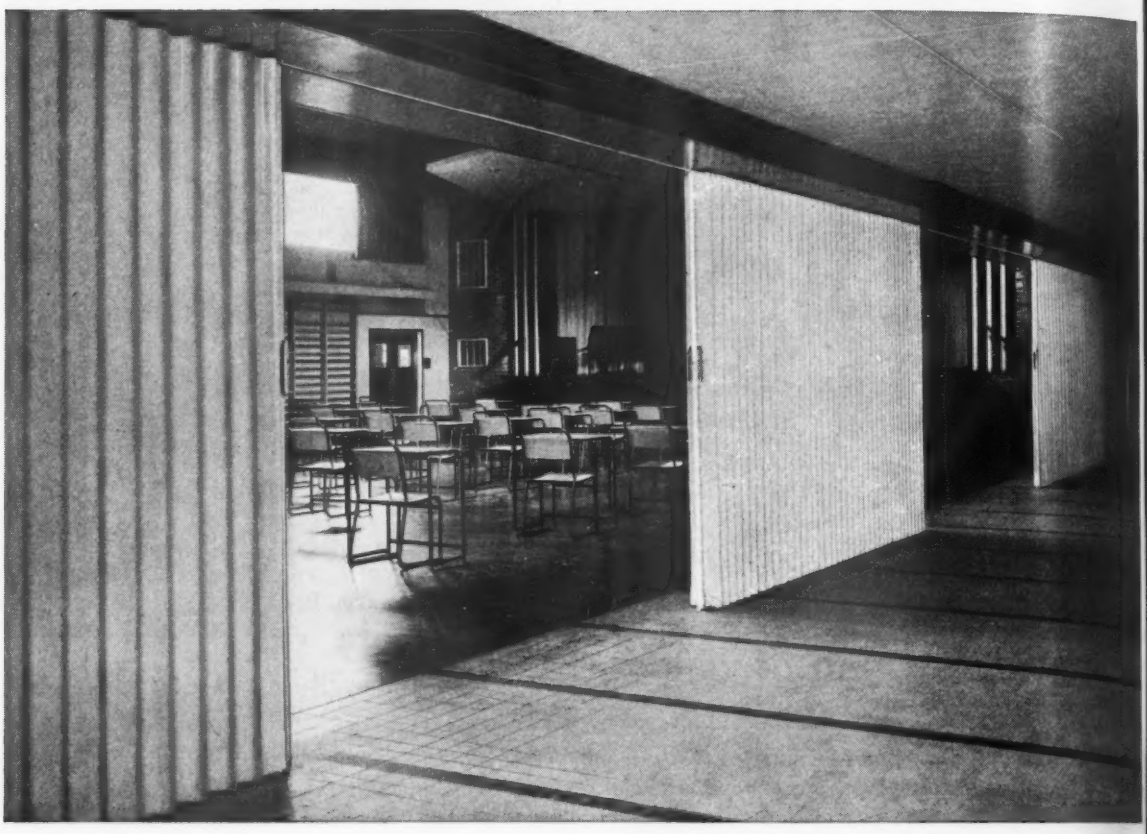

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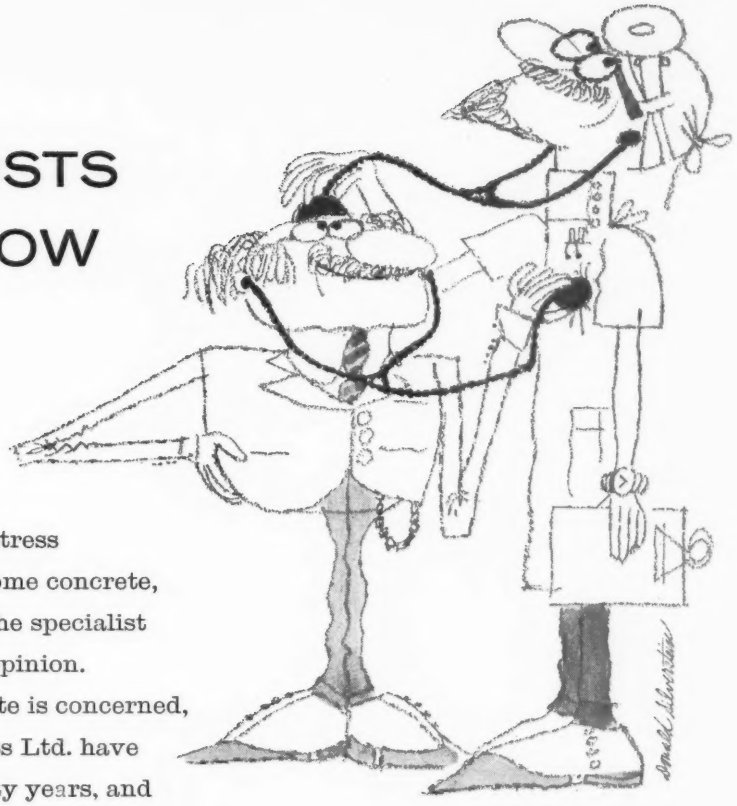

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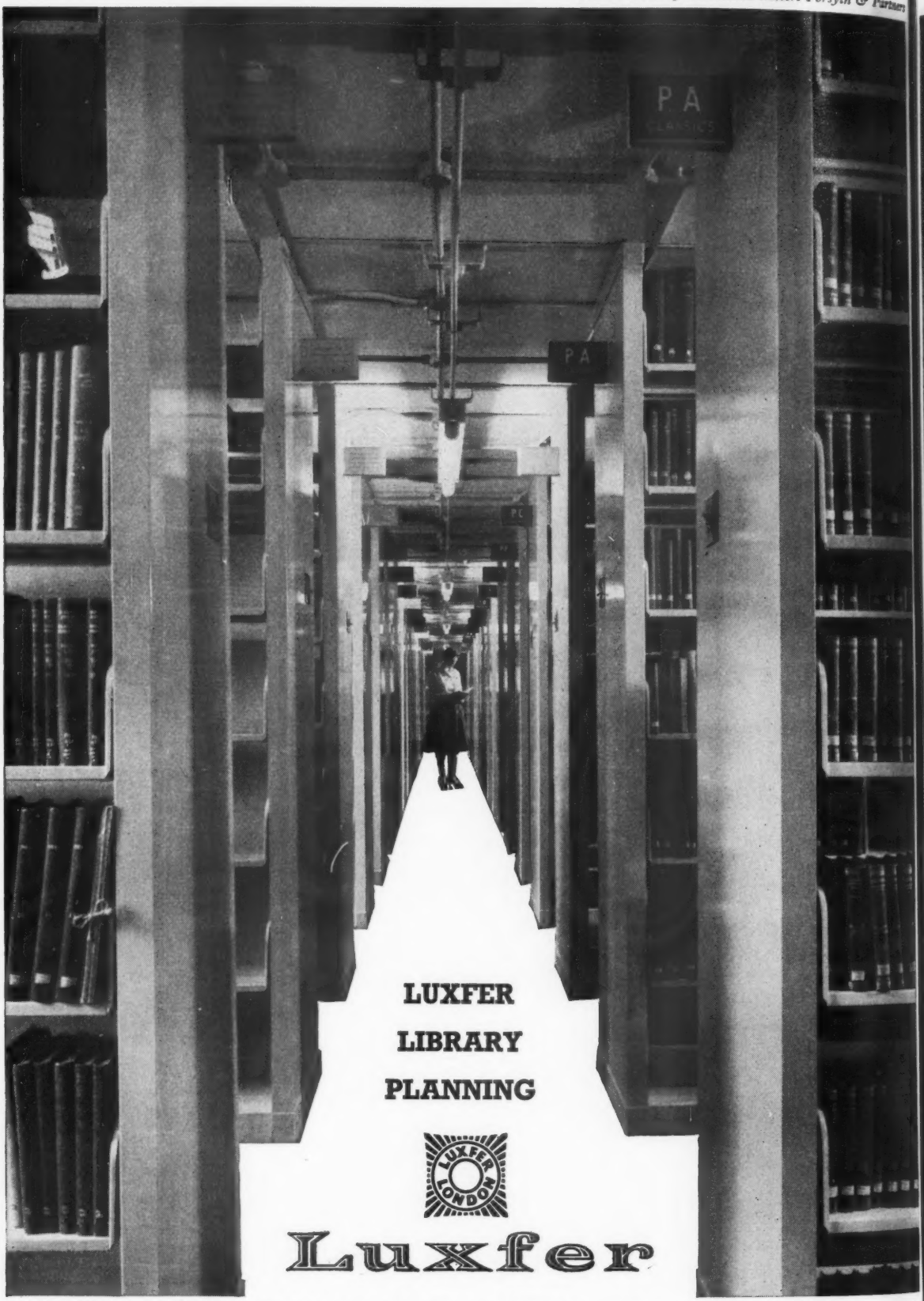

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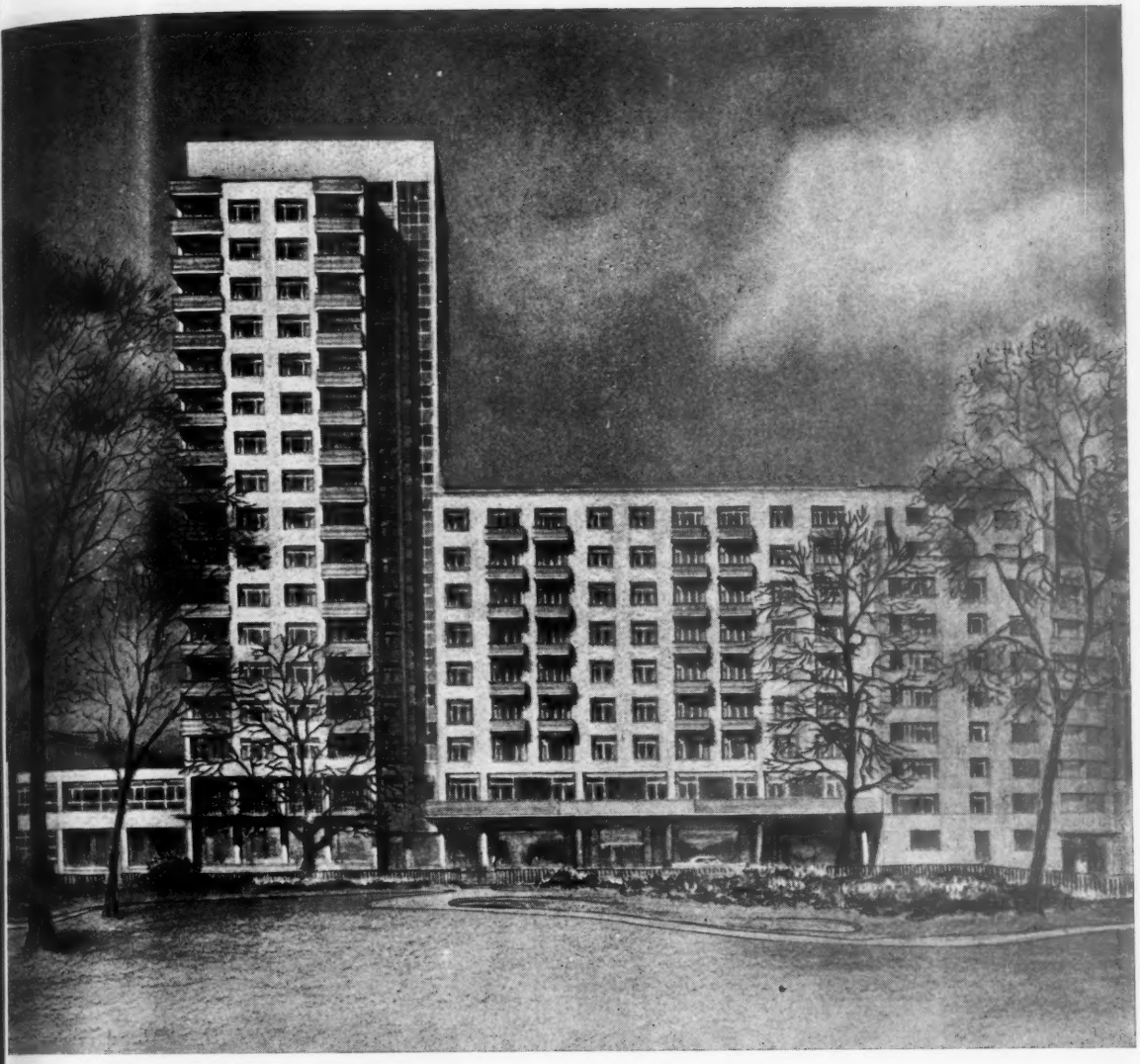

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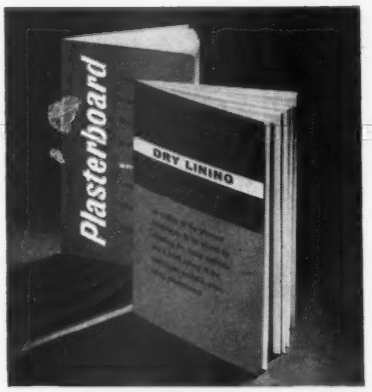

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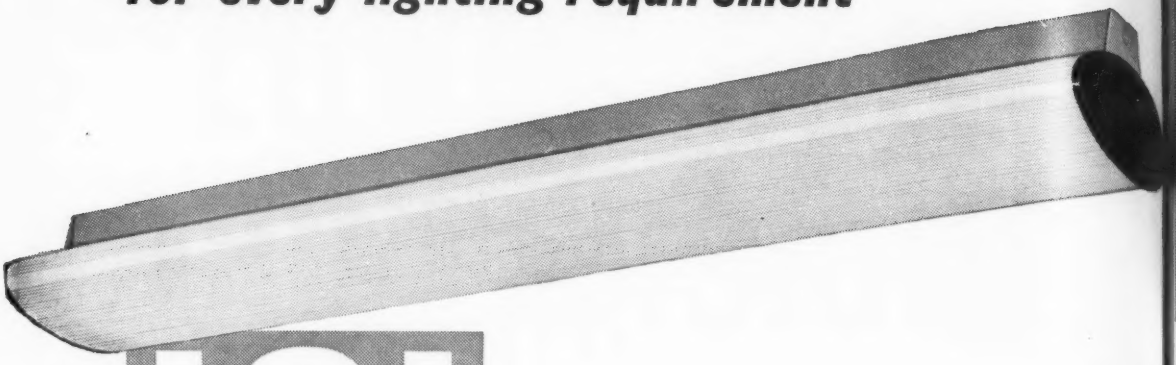

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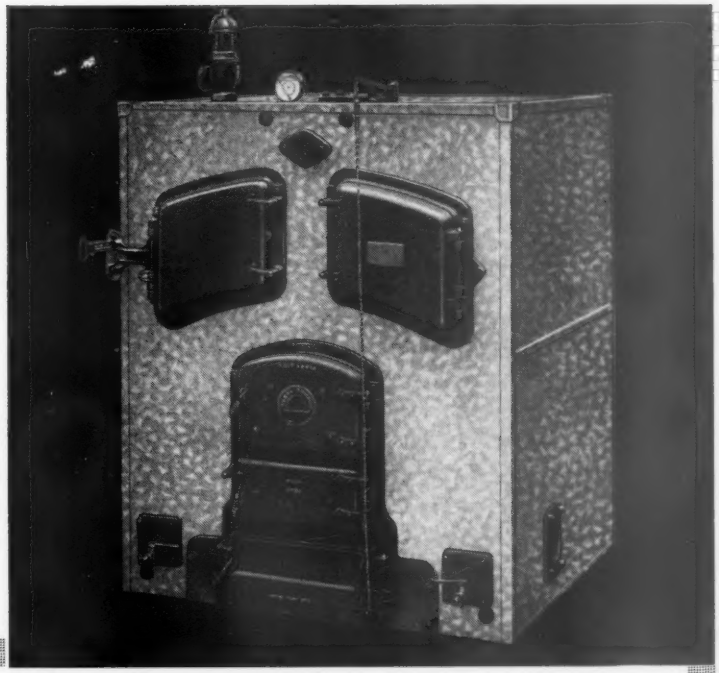

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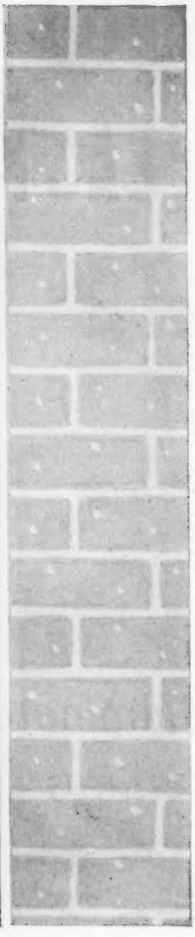

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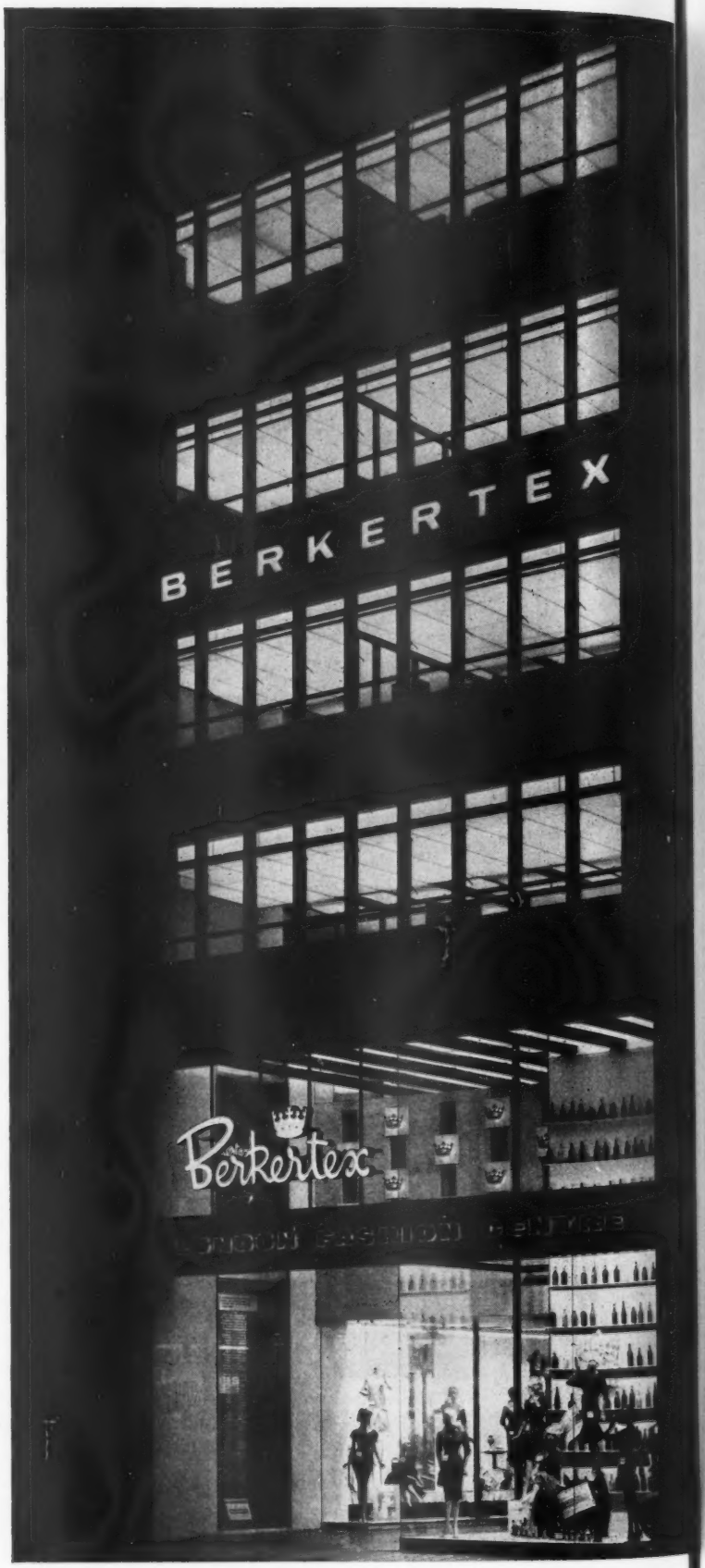

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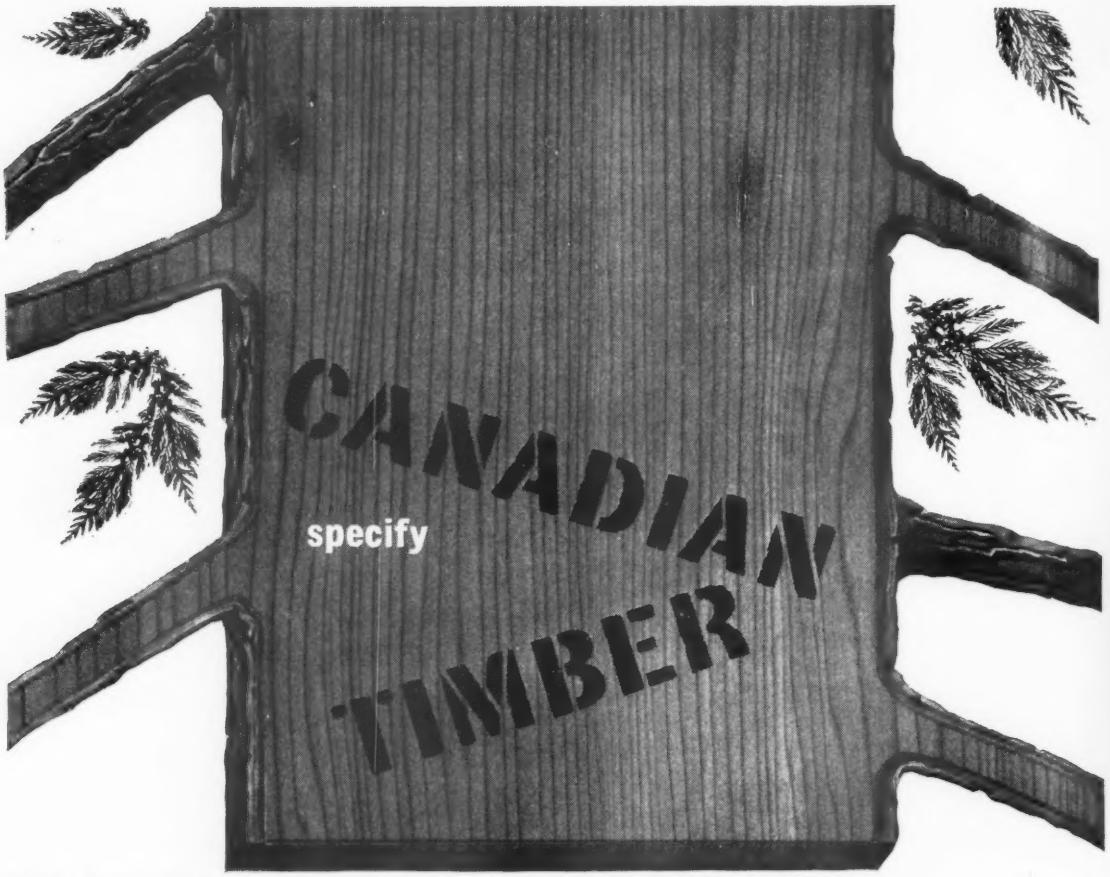

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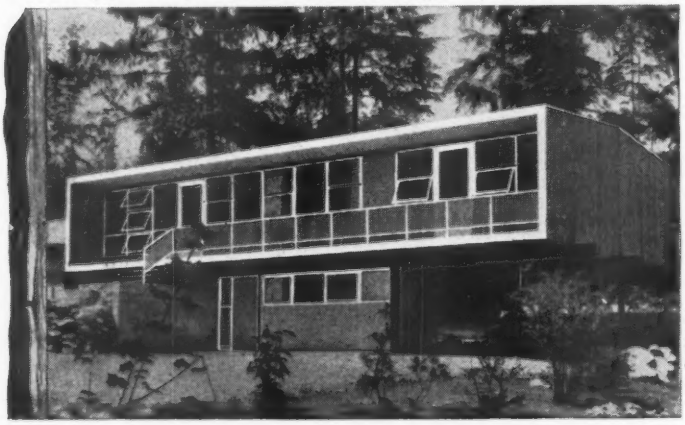

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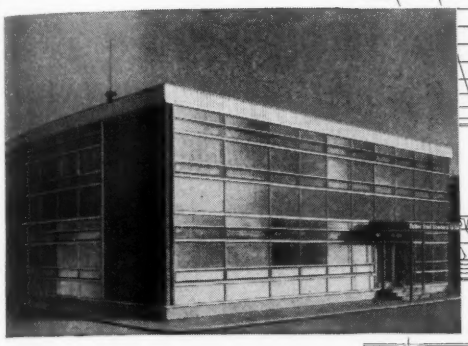

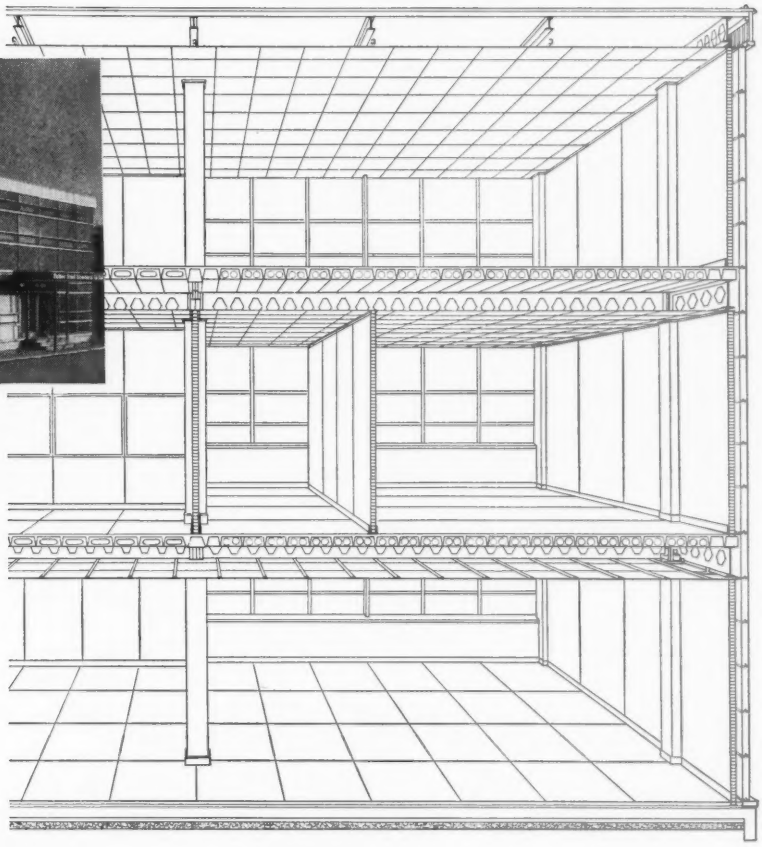

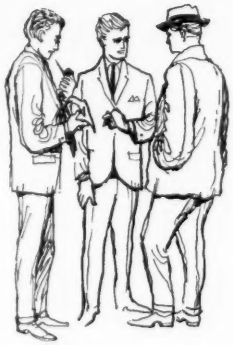

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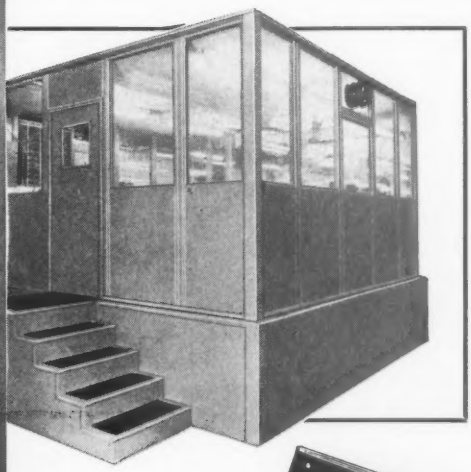

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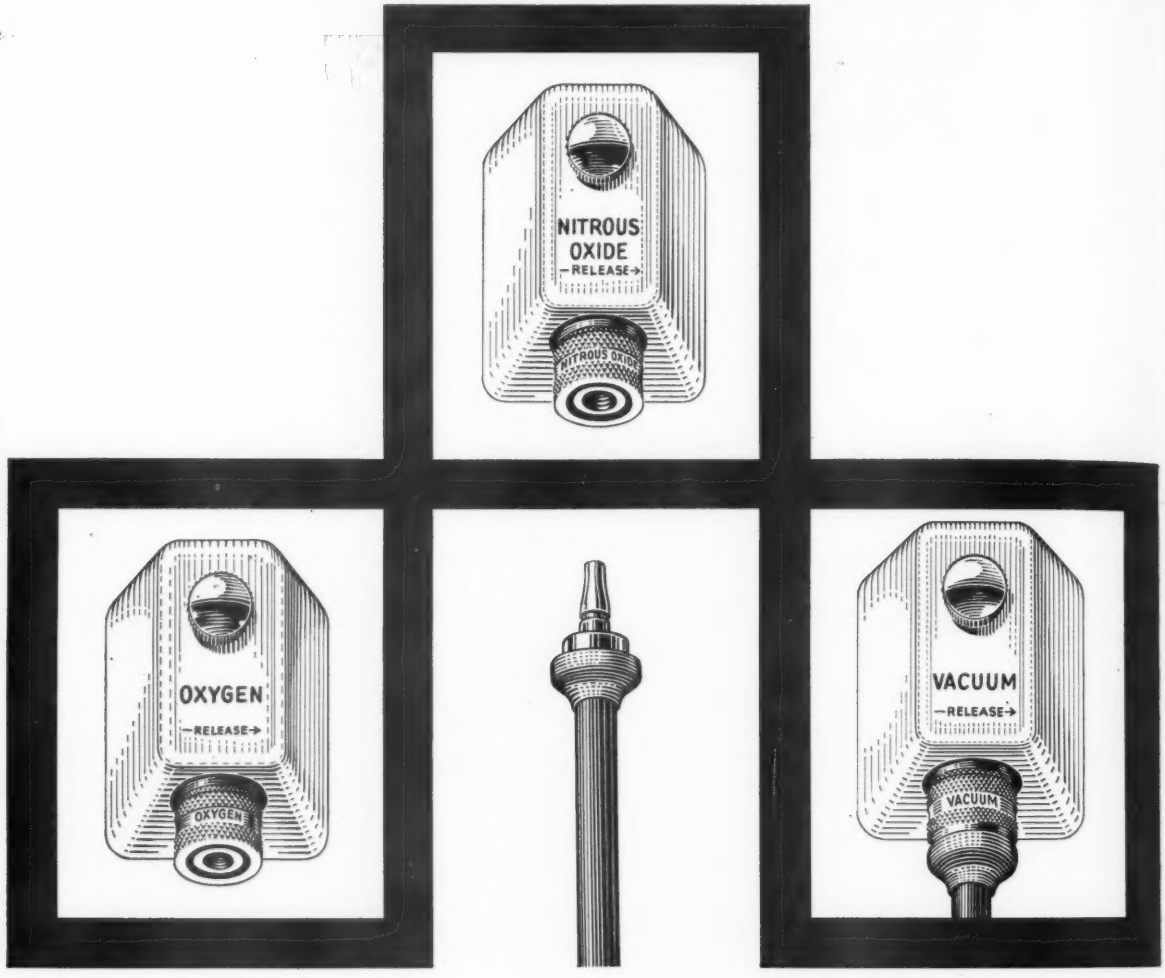

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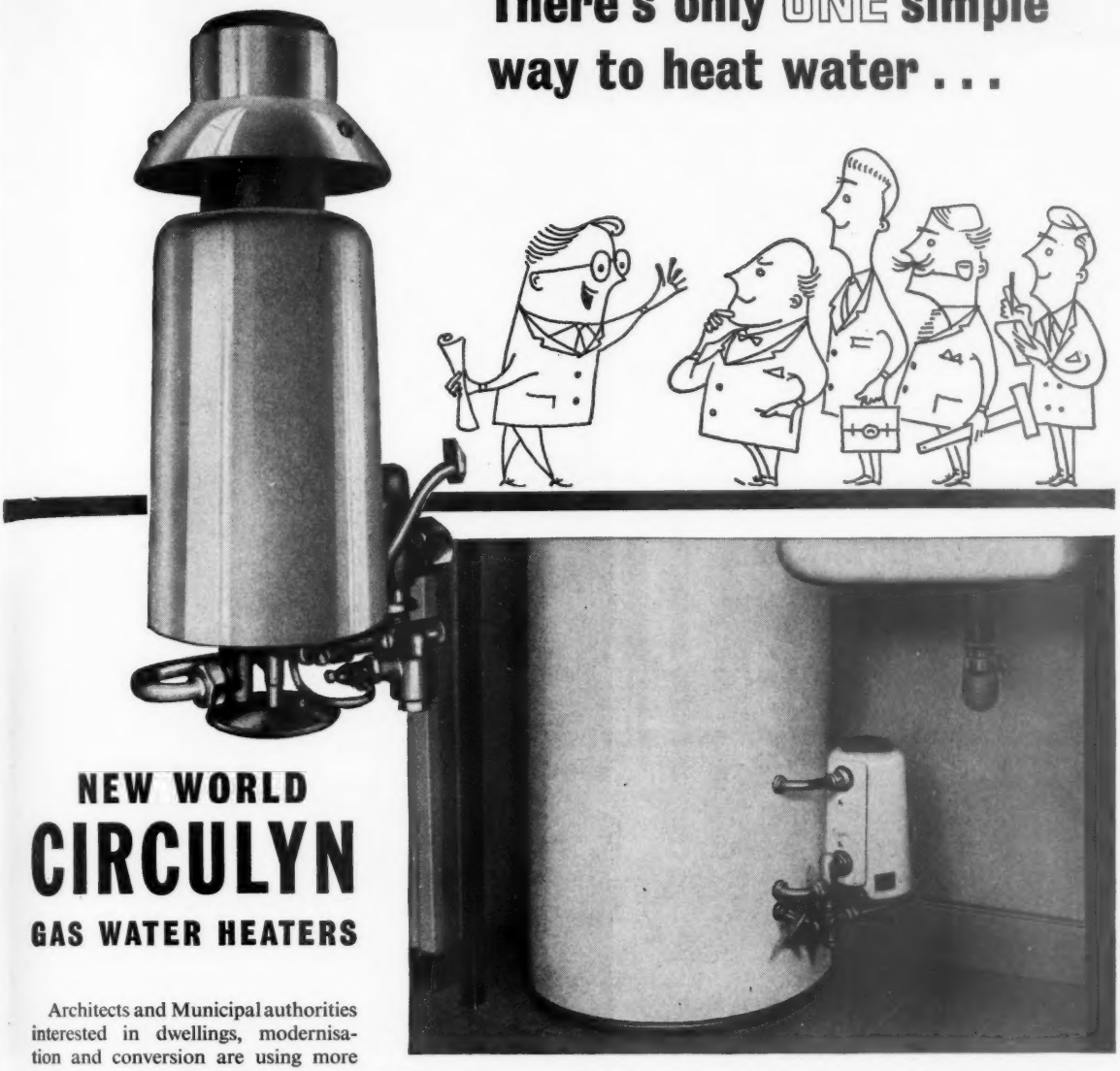

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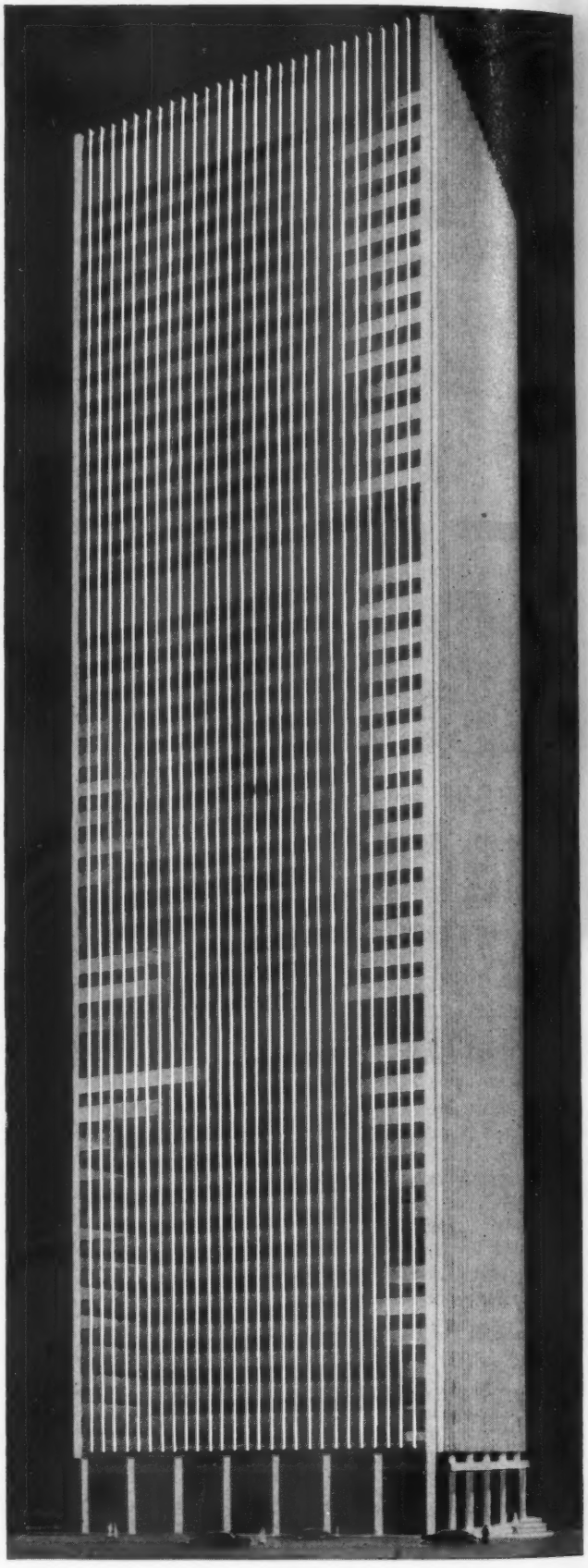

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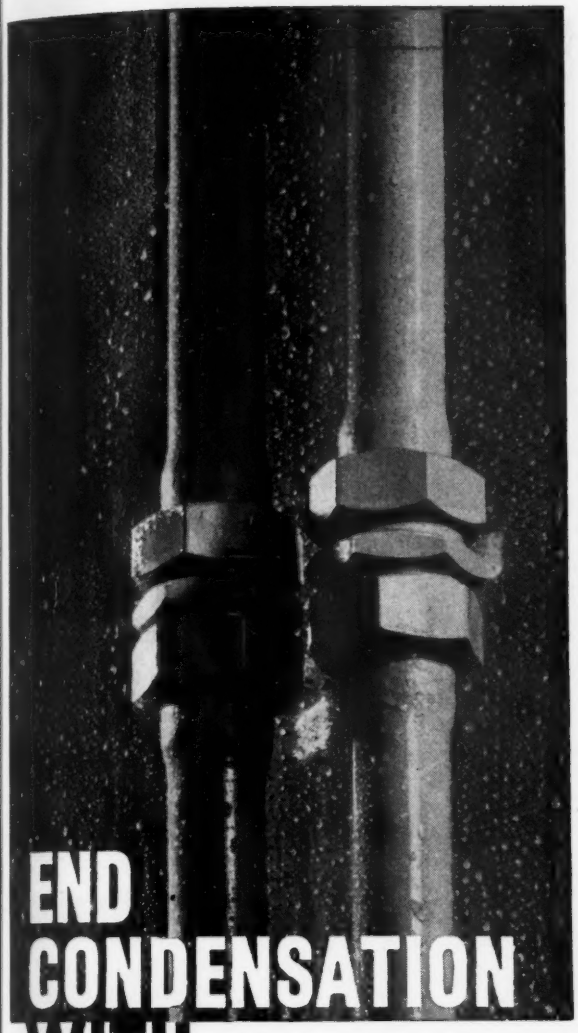

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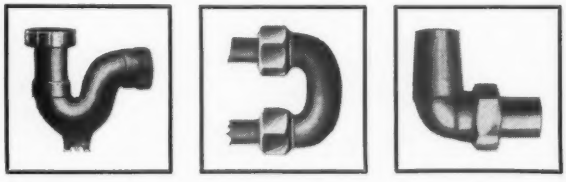

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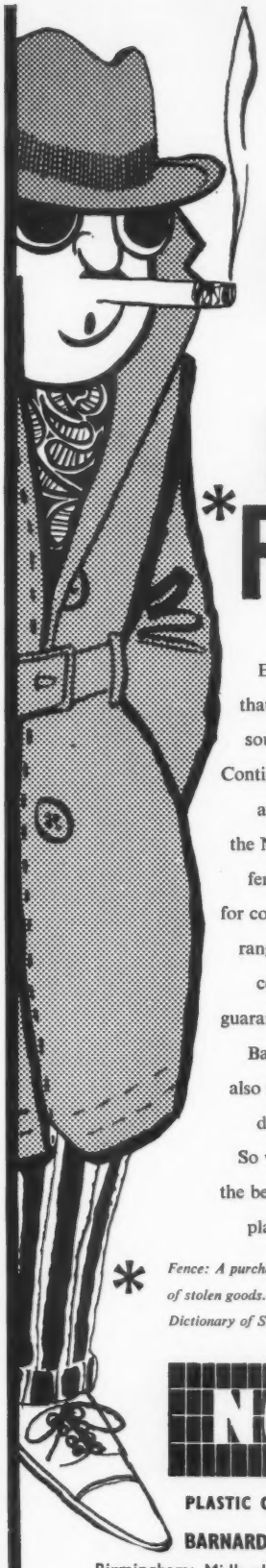

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* *Fence: A purchaser or receiver, and/or a storer of stolen goods.— Dictionary of Slang and Unconventional English.*

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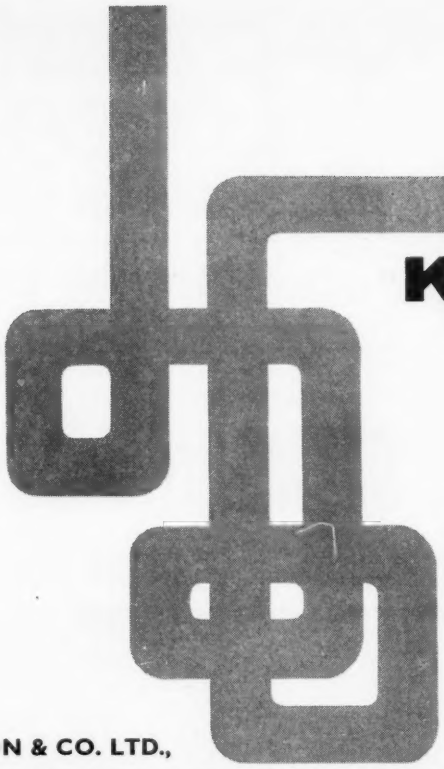

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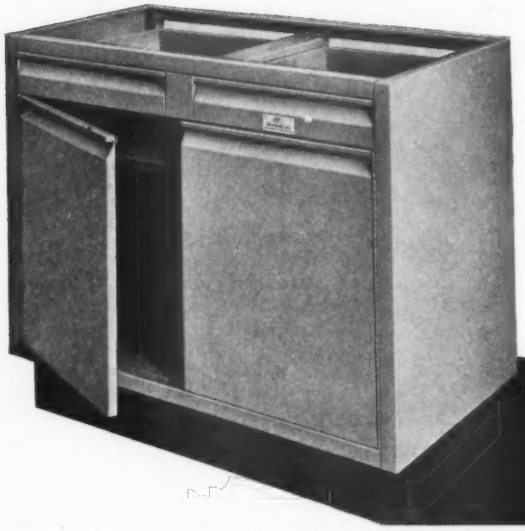

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2 Removable back gives access to services.
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4 Rubber buffers to drawers and doors ensure quiet operation.
5 Recessed door and drawer-handles improve appearance.
6 Adjustable shelves in cupboard units.
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Units dismantle for shipment resulting in lower freight charges, and easy assembly on site.

Full instructions are provided with each installation.

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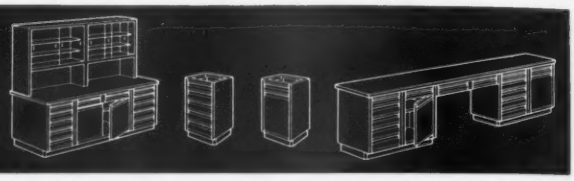

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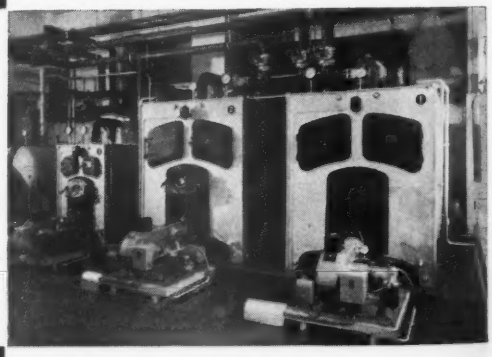

THE NEW SHELL-B.P. HOUSE, BRISTOL

Two Ideal 410 KO Boilers fired with Nu-way ZH 12 oil burners together with one Ideal 29 KO boiler fired with Nu-way Model ZH 6 oil burner. This is part of the heating and hot water installation at the new Shell office building in Bristol carried out by Messrs. Couzens & Akers Limited, Birmingham. Architect: Messrs. Cotton, Ballard & Blow.

Efficient, reliable and good-looking, yet withal competitive in price, Nu-way commercial burners are arranged for easy maintenance by non-technical staff, backed by nationwide spares and after-sales service.

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THE DUNDEE LINOLEUM COMPANY LIMITED

OFFERS ARCHITECTS

2

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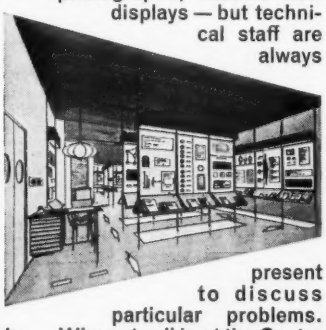
TECHNICAL ADVISORY SERVICE

On call for architects is a team of specialists trained by Dundee who are always ready to help you if you have any problems about flooring, the laying of linoleum under varying conditions, the quality of linoleum that would suit your needs best, or any other queries you may have in relation to the use of linoleum. Just contact Dundee whenever a problem arises, and one of these men will be on their way to see you.

2

THE LINOLEUM CENTRE

Linoleum Centre



At the new Linoleum Centre in Little Britain E.C.1, you will find ideas for the use of Linoleum, recommended methods of installation, general information about the service and maintenance of linoleum. The Centre has been opened in co-operation with the leading manufacturers of subfloorings and all materials used in conjunction with Linoleum. The information is presented visually through photographs, models and displays — but technical staff are always present to discuss particular problems. Why not call in at the Centre yourself—you're bound to find it interesting.

PLUS

NEW RANGE OF LINOLEUM COLOURS DESIGNED SPECIALLY FOR ARCHITECTS

Dundee have launched a new Contract quality range of heavy duty inlaid and plain linoleum in colours specially designed for the architect and designer to use in both modern and traditional schemes. Colours were specially selected by Michael Inchbald, M.S.I.A., F.R.S.A., M.B.A.D.A., noted Colourist and Interior Designer.

The

DUNDEE Linoleum Company Limited,

Dundee House, 39/44, Little Britain, London, E.C.1. *Tel: MONarch 0477*

"probably the most potent instrument in the world"

For it gives most of man's thoughts and aspirations their first tangible form.

Consider a pencil, What an elegant little shaft it is! Basically simple, yet how indispensable to the most complex design! Notice how comfortably it sits in the fingers; for the polished cedar hexagon of a well-bred pencil with its many coats of gleaming lacquer, never forces itself upon one's consciousness, but, like a good servant, unobtrusively awaits one's bidding. Its smooth dense lead will give perfect reproduction of the finest lines, which nevertheless can easily be erased. The perfect point good humouredly stands heavy pressure and does not break, even when dropped. Pick up any degree from 6H to 2B (easily recognised by the coloured ends), they are true and never vary.

How fortunate is the draughtsman who finds all these attributes embodied in one pencil!

Perhaps that is why Rolls-Royce exclusively specify Koh-i-noor in their drawing offices.

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Please send free samples of Koh-i-noor Draughtsman pencils for testing.

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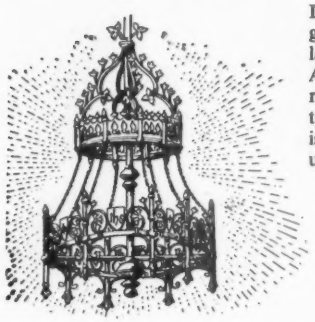

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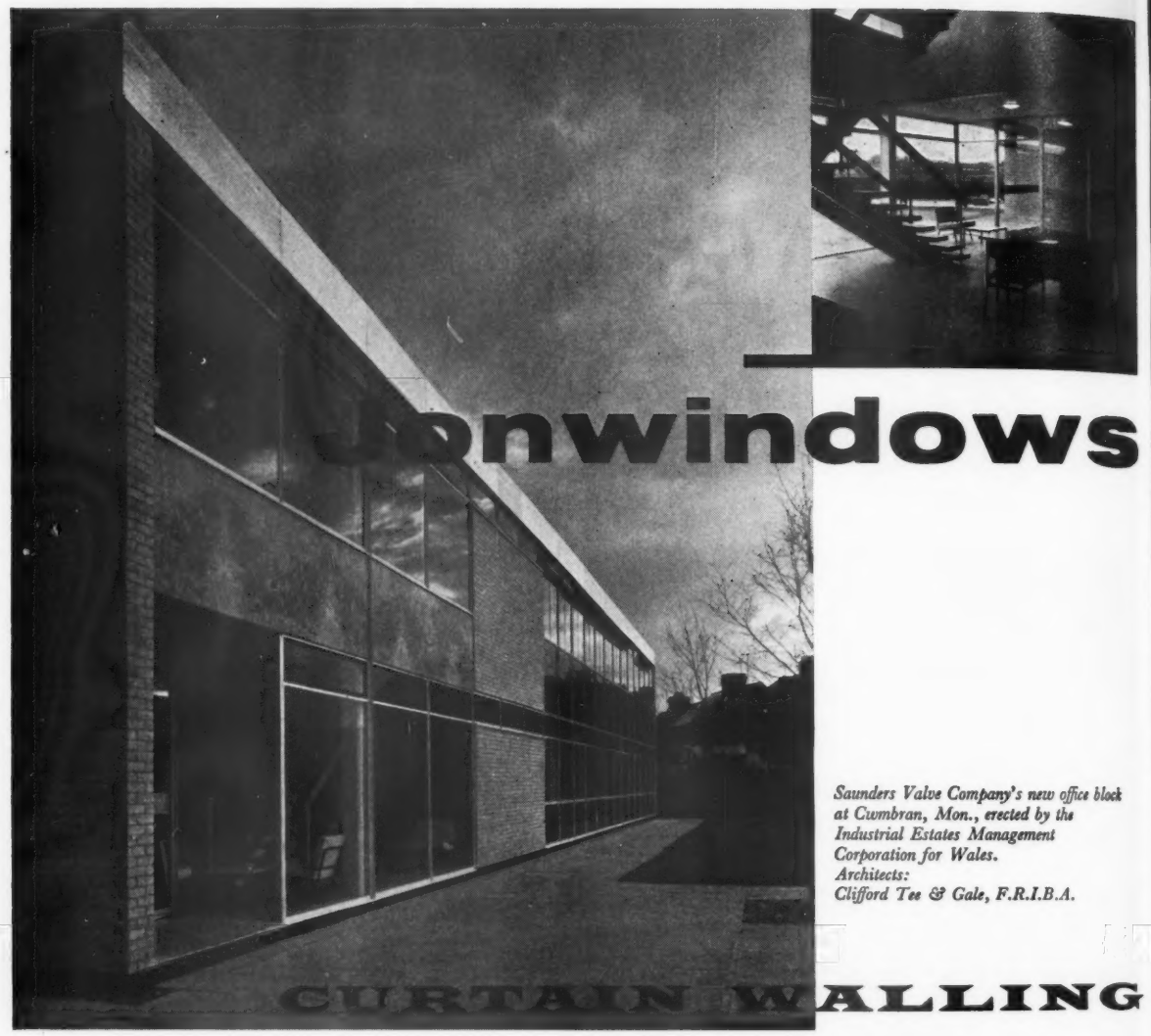

Jonwindows

Saunders Valve Company's new office block at Cwmbran, Mon., erected by the Industrial Estates Management Corporation for Wales. Architects: Clifford Tee & Gale, F.R.I.B.A.

CURTAIN WALLING

Jonwindows Galvanized Steel Curtain Walling—Seen here spanning two storeys, with 4″ cruciform supporting ribs at 6′ 0″ module, bracketed off floor beams. An allowance for vertical expansion is incorporated at the head of the curtain walling and an anodized aluminium fascia forms a capping around the whole perimeter. The grey Armourclad infil panels are secured by aluminium beads.
Pressed steel closers between walls and curtain walling ensure complete office division where required. The curtain walling rests on a pressed metal cill incorporating a condensation channel fixed to a 4½″ skin of brickwork. The imposing entrance foyer has an aluminium screen and double swing armour-plate entrance doors with stainless steel push plates.

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St. George's Roman Catholic Cathedral, Lambeth, originally built in London Stocks and rebuilt in First Hard London Stocks. Architect: Romilly B. Craze, FRIBA

23-storey flats in the City of Westminster

High above the City of Westminster, London's tallest block of flats, the 23-storey, 212 ft. Hide Tower, Hide Place, Westminster, is due for completion in June.

Speed and economy of construction have been achieved by efficient design; the superstructure up to second floor level is of *in situ* reinforced concrete; above this, precast concrete frame units, lifted by tower crane, are anchored by precast reinforced concrete floor slabs to a central core which runs the full height of the building and contains the lift well, refuse chutes and central landing. The reinforced concrete cladding panels, which are faced with Norwegian quartz white crystal exposed aggregate, have been designed for fixing from within – dispensing with the need for scaffolding.

Hide Tower will accommodate 160 flats on 20 floors, above a double-storey height open ground floor, and surmounted by a single-storey laundry and club room. Two high-speed inter-connected lifts will serve all floors.

Director of Housing, City of Westminster,
E. J. Edwards, F.R.I.B.A, F.R.I.C.S, F.Inst.Hsg
Architects: Stillman and Eastwick-Field
Structural Engineers: Charles Weiss and Partners
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